

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[PRICE 6d.

ON THE MANUFACTURE OF STEEL, AS CARRIED ON IN THIS AND OTHER COUNTRIES.

BY CHARLES SANDERSON.

The manufacture of steel is of great antiquity, coeval, if not anterior, to that of iron; it was known to the Chaldeans, the Hebrews, and the Greeks; the processes they are said to have used are detailed by Aristotle, Pliny, and Plutarch, but they are so obscure and contradictory that no reliance can be placed upon them. It appears most probable that steel was, in the first instance, produced accidentally, whilst attempting to obtain iron. This question is, however, more curious than useful; I will, therefore, dismiss it, and turn to the subject before me. Steel is a carburet of iron, more or less freed from foreign matter; it can be produced by two processes, opposed to each other; the first, or earlier method, is by working pig-iron, which on an average contains 4 per cent. of carbon, in a suitable furnace, until the carbon it contains is reduced to that quantity required for steel, which is 1 per cent. The second method is to heat wrought-iron in bars (which contain little or no carbon), in contact with some carbonaceous matter, until it has absorbed that quantity of carbon which may be required for hard or soft steel purposes.

The various kinds of steel which are now manufactured in this and other countries are:—

NATURAL, OR RAW STEEL, which is manufactured from crude iron as obtained from the blast-furnace;

CEMENTED, OR CONVERTED STEEL, which is produced by the carbonisation of wrought-iron;

CAST-STEEL, which is obtained by the fusion of either natural or cemented steel, principally from the latter.

In the manufacture of steel, the quality of the iron from which it is made is of the first importance; it is absolutely necessary that it should be free from earthy matter, silicate of the metal, sulphur, arsenic, &c. Any foreign matter contained in the iron is very injurious for steel purposes, but the silicates are, in my opinion, the most deleterious, since they produce a red short quality, caused by their mechanical mixture with the carbonised molecules of the steel, and thus destroying the malleability of the mass. The mines of Danemora have, for many centuries, enjoyed the highest reputation for producing iron of the finest description for steel, and they alone should be used for producing the very best cast-steel: their high reputation and scarcity have combined in commanding for them a very high price.

The marks **W. & G. O.** are made wholly from Danemora ores; the marks **G. W. & G.** Grid, and some others, receive only a portion of these ores mixed with others in their manufacture. Sweden produces also a large quantity of iron suitable for steel, but of inferior rank to the above; they are technically termed 2d and 3d marks. The ores from which the Swedish irons are produced are almost wholly black oxides, usually containing 50 to 60 per cent. of metal; they are very clean and pure, and might, if properly manufactured, produce finer iron than that generally obtained; their works are, in too many instances, badly constructed, and the manufacture itself is so far from being perfect that there is a great unnecessary waste in the manufacture of the pig-iron into bars, and also in the quantity of charcoal necessary to produce a ton of iron; nevertheless, these commoner irons are sold for steel purposes. Recently some of the Swedish works have introduced our English charcoal refineries, and our mode of working, by which a sounder iron is obtained, and one freer from adventitious matter. The price of **W. & G. O.** is 36*l.*; **G. W. & G.** 33*l.*; **W. & G. O.** 32*l.*; **W. & G. O.** 30*l.*; Grid and Stembuck, 24*l.*; the iron called 2d marks vary in price, according to their intrinsic quality, from 25*l.* to 18*l.*. The 3d marks from the latter price as low as 15*l.* per ton. Russia sends also a large supply of iron for steel purposes, of which the marks **K. B.** and **I. O. P.** from the mass, being from 6000 to 7000 tons annually. This iron is of good medium quality, and sells readily at from 17*l.* to 19*l.* per ton. It is manufactured in the Ural district of Russia, by the usual charcoal-refinery process. A part appears, however, to have been puddled, using wood for fuel. In 1830 it was a question whether a puddling furnace could be so constructed as to admit of the use of wood. Berzelius was of opinion that it could not. During my residence in Styria and Carinthia, in 1832, I erected a puddling furnace at the works of Mr. Rosthorn, in Wolfsberg, in which wood was used as a fuel. I experienced no difficulty in working it, and it produced very good iron, with a large economy of fuel when compared with the charcoal-refinery process. In this furnace I puddled 30 cwt. of charcoal iron in 24 hours. During this time I consumed 180 cubic ft. of wood, as usually measured in the forest, equal to about 1½ cord our measure. The blooms hammered very solid, and the waste 10 per cent. The furnace was a small one, and the fire-room much larger than that used for coal. Since this trial, several works have used the process, both in Sweden and Austria, but it has not become general. By this plan an excellent steel iron can be produced. Steel iron may also be produced direct from the rich ores of this and other countries. For this process Mr. Clay obtained the first patent; it was tried in Liverpool, but was unsuccessful, first, because he could not sufficiently deoxidise the ore, and subsequently, in its manufacture into malleable iron he could not get rid of the earthy matter—this rendered his iron unfit for steel, as well as ordinary purposes. I obtained the next patent, in which I provided for a more ample deoxidation of the ore, and also for the separation of the earthy matter from the metallic—this iron made good steel. There exist a variety of causes why this process has not been worked, although perfect in itself; it is, however, now about to be adopted for the production of steel iron from the rich ores of England, which, if properly manufactured, will produce an excellent steel. Since this important branch of manufacture is becoming daily of greater importance, every step towards the production of fine steel iron in this country should be encouraged, inasmuch as it makes our own resources available for our wants.

In the manufacture of common steel, particularly that for railway springs, a very large quantity of steel iron is produced from English materials. Of this kind of iron not less than 15,000 tons are annually consumed in Sheffield for springs and common hardware. This iron is produced from the coke-made pig iron, by puddling, during which process substances are added which, although not always the same, yet produce nearly similar effects.

Oxide of manganese, salt, sulphuric acid, and clay, mixed together, formed the patented substance of Dr. Schafhaeuti, by the addition of which into the puddling furnace the metal becomes freed in a great measure from the earthy matter contained in the crude iron, and a purer and denser iron is produced. It is well known that the process of puddling and rolling was the invention of Mr. Cort, of Gosport, it was introduced in 1784; before which period the charcoal finery alone was used. The invention opened a new and extensive field for the industry of the nation; coal became the medium of the manufacture of wrought-iron instead of charcoal; the process has expanded the production of this kingdom from 17,000 tons in 1740, to 3,000,000 tons in 1854. The facility with which malleable iron can be produced with coal has caused the erection of magnificent and colossal iron-works, finding profitable occupation for a great number of men, and producing throughout the ramifications of its manufacture, and its subsequent uses, an amount of wealth almost incalculable. This is somewhat foreign to the subject, excepting that, by the use of this invention, the steel iron market is annually supplied with 15,000 tons so puddled; and to me it is a pleasure, as it is a pride, to bring forward to public notice the invention of a man which has produced such astonishing results in our works, our railways, and steam navigation.

At present we are largely indebted to Sweden for our supply of suitable iron for the manufacture of steel.

The following is a statement of our importation since 1845:—

1845Tons 18,007 1850Tons 23,098

1846Tons 30,810 1851Tons 35,467

1847Tons 23,264 1852Tons 33,517

1848Tons 20,438 1853Tons 33,540

1849Tons 26,605 1854Tons 24,436

With very trifling exceptions, the whole of this iron is used for steel. The above figures give an average importation for ten years of 26,011 tons, to which we must add the importation from Russia and the steel now made in England. I, therefore, estimate the weight of steel manufactured in England at 40,000 to 50,000 tons annually.

The fuel used in England for the manufacture of steel is entirely coal and coke. Coal is used in the converting furnace for heating the cases which contain the bar-iron during its process of cementation. In a properly constructed furnace one ton of good hard coal is consumed in the conversion of one ton of iron, thus representing a consumption of 40,000 to 50,000 tons per annum for this purpose.

Coke is used in the melting process—the consumption is on an average 63 cwt. per ton of ingots; although all iron is converted, and we can thus obtain the consumption of fuel, yet we have no means of exactly ascer-

taining the weight of cast-steel manufactured annually in England. I should estimate it as from 25,000 to 30,000 tons—this would give a consumption of 81,000 to 97,000 tons of coke; and assuming that the coal will produce 60 per cent. of coke, it will represent a consumption of 113,700 to 136,500 tons of coal.

In Germany, France, and Austria, with trifling exceptions, steel is produced in a furnace similar to the charcoal refinery; it is termed raw or natural steel, deriving its carbon from the metal from which it is produced. Charcoal is the fuel used; the quantity is very variable, depending in a great measure upon the dexterity of the workman; we may, as a general average, estimate the consumption of 240 bushels per ton of raw steel produced. Having laid before you an estimate of the raw material used in the manufacture of steel, I shall now proceed to explain the processes which are used in various countries. The kinds of steel which are manufactured are:—Natural steel, called raw steel or German steel; Paul steel, produced in Styria, by a peculiar method; cemented or converted steel; cast-steel, obtained by melting steel; puddled steel, obtained by puddling pig-iron in a peculiar way.

Natural or German steel is so called because it is produced direct from pig-iron, the result of the fusion of the spathose iron ores alone, or in a small degree mixed with the brown oxide; these ores produce a highly crystalline metal, called spiegel-eisen (looking-glass iron), on account of the very large crystals the metal presents. This crude iron contains about 4 per cent. of carbon, and from 4 to 5 per cent. of manganese. Karsten, Hassenfratz, Marcher, and Reamur, all advocate the use of grey pig-iron for producing steel; indeed, state that first quality steel cannot be produced without it—that the object is to clear away all foreign matter, by working it in the furnace, to retain the carbon, and combine it with the iron. This theory I hold to be incorrect, although supported by such high authorities; grey iron contains the maximum quantity of carbon, and, consequently, remains for a longer time in a state of fluidity than iron containing less carbon; the metal is then mixed up with not only the foreign matter it might itself contain, but also with that with which it might become mixed in the furnace in which it is worked; this prolonged working, which is necessary to bring highly carbonised iron into a malleable state, increases the tendency to produce silicates of iron, which entering into composition with the steel during its production, renders it red short; again, by this lengthened process, the metal becomes very tender and open in its grain; the molecules of silicate of iron which are produced will not unite with the true metallic part; and also, whenever the molecular construction of iron or steel is destroyed by excessive heat, it becomes unmanageable; both these are the causes of red shortness, and also the want of strength when cold.

[To be continued in next week's Mining Journal.]

ON CAUSTIC LIME IN BLAST FURNACES.—Caustic lime is now partially employed at several works in Wales, and other iron-making districts in Europe, as a substitute for the raw limestone commonly used as a flux in blast furnaces. Although the advantages which are found to attend its application have not fully realised the sanguine expectations of furnace proprietors, they have sufficed to show that its application is attended with some important results to the metal produced from the blast furnace. The motives which induced ironmasters to try the effects of burnt lime as a flux, appear to have been a desire to augment the production of metal from the blast furnace, conjointly with a diminution of the expenses attendant on the smelting operation. This, it was confidently anticipated, would follow on the substitution of lime for the carbonate of lime hitherto used. Calculations based on the composition of the gases at different altitudes in the furnace, pointed out the carbonate of lime as exercising a prejudicial effect on the working of the furnace. It was believed that the absorption of caloric by the carbonic acid of the limestone in its passage from the solid to the gaseous state in the blast furnace, would no longer take place, and that the reduction in the furnace fuel would more than compensate for that used in the lime kiln. It was also believed, that by calcining the limestone previous to its introduction into the blast furnace, the cooling influence which is occasioned in the upper regions of the furnace by its introduction in the raw state would be avoided, and as this increase of temperature over that usually obtained would be equivalent to an increase in the altitude of the furnace, a corresponding augmentation of the usual weekly make of the furnace would result from the altered mode of filling the lime. Theoretically, a considerable saving is effected by the use of caustic lime, but practically, there is little or none. At works where limestone is filled into the furnace without having been broken into suitable lumps, the reduction in the consumption of the limestone and fuel by the use of caustic lime may be considerable, but where it has been usual to break the limestone into pieces, not weighing more than a few ounces, the diminution is almost inappreciable. Large masses of limestone require a correspondingly longer time for their complete calcination, and while this is being effected, they descend into the furnace along with the ore and fuel, until they have absorbed from the latter the caloric necessary for their complete decomposition. The depth at which this is effected will depend on the size of the stones used. The larger these are when filled, the deeper they will descend into the furnace before complete decomposition. In those furnaces which are supplied with finely broken limestone, the lumps, from their small bulk, quickly absorb the requisite caloric, and are afterwards in their further descent distributed through the burning materials. The caloric which they absorb during their conversion is collectively the same as that absorbed by the coarsely broken limestone, but with this difference, that it is absorbed in the upper regions of the furnace; where, if the furnace has been fed with raw bituminous coal as fuel, the heat is at all times sufficient for the purpose, and can be spared without sensibly impairing the efficiency of the furnace. The calcination or decomposition of the limestone is effected by a certain determinate quantity of fuel, and this will be the same, whether the operation be conducted in the mouth of the blast furnace, or in an independent furnace, so long as it be accomplished before the materials in the furnace have reached the region of the boshes. At Merthyr Tydvil, the first experimental application of caustic lime was made in a blast furnace, 50 ft. high, and 18 feet in its largest diameter. The charge before alteration averaged about 18 cwt. of calcined clay ironstone, 18 cwt. of forge cinders, and 9½ cwt. of coarsely broken limestone, to the ton of coal consumed. With this burden, the make for the period of six months preceding the experiment, averaged 108 tons of forge pig-iron weekly. The burden was altered to 18 cwt. of calcined clay ironstone, 18 cwt. of forge cinders, and 6 cwt. of burnt lime to each ton of coal, when the weekly make for the first three months of the experiment averaged 114 tons. From this experiment, it would appear that the application of burnt instead of raw limestone was attended with an augmentation of the weekly make of iron equal to 5 per cent. on the make for the preceding six months. On going further back, however, it was found that the average weekly make of the furnace for the preceding three years was 116 tons. It is, therefore, questionable if the augmentation was solely the effect of the calcination of the limestone. But, although the augmentation in the make may have resulted from other causes than the use of burnt lime, there appears no reason for doubting its connection with an improvement observed in the quality of the iron produced. This was decidedly superior to the iron previously made, where softness and ductility were required. Its conversion, however, into refined metal, required more than the usual blowing, and its refractory disposition was still further manifested in the puddling forge, where its conversion into puddled iron was attended with some difficulty. The consumption of fuel in the blast furnace with the limestone flux amounted to 38 cwt. on the ton of pig metal produced; with burnt lime it was 36½ cwt. to the ton, showing a difference of about 4 per cent. in favour of the burnt lime. But, owing to the extra blowing in the refinery, and the difficulties encountered in the puddling forge, the additional fuel consumed in these operations, amounting to 3½ cwt. on the ton of puddled iron, leaves a balance of 2 cwt. in favour of the limestone flux.—W. TRUBAN: *Journal Franklin Institute.*

IRON SMELTING.—A correspondent of the *Practical Mechanic's Journal* says, that Mr. T. Sellick, of the Sussex Zinc Mines, New Jersey, has recently perfected a new process for fusing the ore known as Franklinite, whereby the iron comes out of the furnace a beautiful and excellent pig, worth \$50 per ton; whilst the zinc is sublimed and condensed as a yellowish-white powder, worth in that form \$100 per ton. One hundred tons of this ore, as picked up in boulders on the surface, yields about 20 tons of iron and 30 tons of the zinc powder, the latter being chiefly used for paint. The single furnace now in use is represented as capable of fusing about 10 tons of ore per day.

MADAME TESSAUD'S EXHIBITION.—A very beautiful and highly classical portrait model of the late Emperor Nicholas has just been placed in the great room of this establishment. The figure of the Emperor is represented in the uniform of the Guard Noble—the coat white, with red facings, splendidly embroidered in gold; cuirass of highly polished steel, embossed with gold; high boots, &c. It was lately executed in Paris, under the immediate superintendence of Messrs. Tessaud, and is certainly one of the best and most interesting models in the exhibition.

WORKING STEAM EXPANSIVELY.—CRADDOCK'S ENGINE.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—I perceive that in your last Journal you have made some remarks upon my inventions. Seeing also, in the same Number, an account of the subjects brought forward for discussion at the meeting of the Mechanical Engineers, held at Birmingham, last week, that Mr. E. Allen, of London, read a paper "On the Commercial Economy of Working Steam Expansively in Marine Engines," and also the account given of Mr. Fairbairn's lectures in your leading article, in the *Mining Journal* of the 26th March, these, and other indications that have come to my notice lately, induce me to trouble you with this letter. It is now 16 years since I first presented these views upon the notice of engineers; 13 years ago I endeavoured to obtain the countenance of Mr. Bury, of the firm of Bury, Curtis, and Kennedy, and also Messrs. Robert and George Stephenson, and several other leading railway engineers, as to the advantages of using steam at 100 lbs., or even 200 lbs., on the inch; but I was told that the danger of so doing precluded the thing being entertained. In vain did I urge that, with boilers properly constructed, the danger would diminish as the pressure was increased, until such destruction of life and property as was taking place from boiler explosions would be unheard of. I found one person, Mr. Duranese, then managing engineer under Mr. Wood, at the Liverpool end of the old Manchester and Liverpool line, who saw the importance of high-pressure steam, and who was the first to extend the pressure beyond the then fixed limit, which was 60 lbs. on the inch. Mr. Allen, who was then at Crewe, and Mr. Kennedy, of the firm above referred to, were also more open to consider the matter than most I met with. In the year 1831 it was made a matter of praise of Brunel, Stephenson, McConnell, Crampton, and other engineers, that their engines were working at 130 lbs. on the inch; whilst in the Exhibition I was denied a ½ in. pipe of steam to show that all the advantages which Newcomen and Watt had brought to the steam-engine, by condensing with water, was to be obtained by the atmosphere where water could not be obtained; and that in all situations the economy of the Cornish engine and boiler was within our reach, and the difficulty from deposits in the boiler removed. I was also denied the request to place the inventions in the Exhibition, which constitute my patent of 1832 (and which were in 1831 in models), although I had the space requisite to show them. Further, all allusion to my inventions which were shown was scrupulously avoided in the published report of the Jury.

In your reference to Mr. William Fairbairn's lectures, in a recent Number, it is stated that so convinced was he of the advantages of high-pressure steam worked expansively, that he urged preparation for greatly increased progress; for it must be obvious that steam generated under pressure which compressed it into one-fifth or one-sixth the space of steam of an atmospheric pressure, and again applied it to an engine of little more than one-tenth the bulk, must be a desideratum in the application of steam; and concludes his lecture by stating that he looked forward to the time when what still seemed to be impossibilities would result in a great extension of the action of the steam-engine, and in the use of steam.

In my lectures delivered in 1843, I set out by insisting upon three primary conditions to be kept in view by all who would be improvers of the steam-engine—viz.: First, the largest absorption of the heat arising from combustion, so as to obtain the greatest quantity of steam with the least expenditure of fuel; secondly, by strict attention to the expansive properties of steam, and thirdly, by the most efficient and the largest available mechanical effect; and thirdly, by the most efficient and universal condensation of the steam, so as to retain the pure water, and obtain the maximum. In the composition of these lectures I now see some things I should, if reprinted, amend, but in substance 11 years' practice only confirms me that all the views I have put forth there are sound; and they lead inevitably to the conclusion that the inventions referred to below, and which I have for 16 years laboured, under every discouragement and no small amount of injustice, to originate and mature, are such of them an essential link in the chain which is to draw forth the full amount of mechanical effect derivable from steam, and to apply it with safety, portability, and economy, to the various purposes required.

The *Times* has now made the discovery which has long been obvious to me, that the much boasted equitable treatment of the rights of individuals in this country has no real existence beyond the dread which one party in the State can exercise over the other; and that those whose lot it is to be the pioneers of the greatest good to the greatest number are always so few as to become a prey to any class or party that, by misrepresentation and fraud, can delude the public, and thus at the opportune moment appropriate that which by right they have no claim to. Whether this principle of action has been the cause which has produced such sterility of commanding talent, with earnest honesty and energetic purpose, I leave to others to enquire; but I take leave to remark that when rare talent is so treated by any nation, the very foundations of its greatness are liable to be undermined, and its collapse may come in a manner and at a time least expected; as whilst it is glorying in the self-satisfaction of the uncontrolled application of what has been accomplished, the clear and single-minded agent is keenly looking out for those whose natural aptitude mark them out as the fittest agents to accomplish his designs.

The first step taken towards the attainment of the following inventions was to arrive at a clear knowledge of the abstract principles, which in this case are fixed qualities of matter, with their relations to each other, and then by judicious mechanical arrangements to guide and modify at pleasure their mutual influence, so as to secure the end aimed at.

1. The condensation of the steam by the atmosphere stands first, as when the value of such result is fully understood, it will be considered by all, as it has always been by me, to be the most valuable of any of the numerous improvements that I have made in the steam-engine. This is accomplished in a thorough and effective manner. It has been tested for seven years, and found to give a vacuum of from 22 to 23 inches of mercury, even with steam used in the cylinders at 90 lbs. on the inch, the pure water being returned for the use of the boiler; so that the assertion is supported that as great economy, or even greater, may be obtained by these inventions, in any situation where one gallon of water per horse-power per day can be obtained, than the Cornish engine is capable of in the comparatively few situations it is suited to, and which I always to contend with those whose interests may be affected, with the obstinate pretension of whatever is ancient, and finally, with those who are jealous, and these three classes united form the great majority of the public; yet the facts will (by their own living their opponents, if in no other way) convince mankind in general of their value, who will then feel surprised that such things should have been offered in vain for so many years.

2. With water for condensation the same kind of condenser is used.

3. The next improvement is a complete tubular boiler, possessing all those qualities which have been much desired; and providing most effectually against the loss of life and property which is continually occurring from boiler explosions. These boilers enable us with safety to generate steam from 10 to 500 lbs. on the inch, or even higher if desired.

4. The next in order is a regulating damper, by which the most perfect control over the generating of the steam in the boiler is obtained.

5. The engines are also designed so as to be simple, compact, and suited to convert to useful purposes the large amount of motive-power hitherto neglected, which is contained in steam when generated under high pressure, and which, by the use of a small steam tube, is so improved, and the pressure upon them so governed, as to give the greatest efficiency with the smallest possible wear of the valves and the cylinder faces.

6. The steam valves and steam passages are so arranged as to render the double cylinder engine—when the cranks are placed at right angles—as completely capable of moving the load as if two distinct engines were used, as in the present marine practice, thereby removing the objections to double-cylinder-engines for marine purposes.

7. The connecting rods and other parts are so arranged that we get a connecting rod more than three times the length of the stroke, and at the same time this directing connecting rod engine occupies as little room as the oscillating engine, without its disadvantages.

8. By a simple mode of constructing the cylinders and cylinder casing, the working steam is protected from being condensed in its expansion in the engine until it has done its work, and escapes to the condenser.

9. The combination of the evaporative principle in conjunction with my atmospheric mode of condensing.

10. The cooling of the injection water by the same means, if desirable to do so.

11. An improved boiler for portable purposes, containing the largest possible amount of surface with the least weight, and safe with any pressure up to 400 lbs. These boilers can be made equal to 10-horse-power, and yet not above 10 cwt.

12. Is a simple and effective means whereby the expansive valve is made to cut off the steam and regulate the speed of the engine in a far more complete and economical manner than by the throttle valve, the engine itself regulating the cut off of the expansive valve, or if desired it may be done by hand.

In the foregoing separate combinations I have indicated several of minor importance. But any one who will give but a slight consideration to the extent and nature of them, will be convinced that they are not trifling. I think that a careful inspection will enable him to form a correct opinion. These inventions are based upon those principles which, so far as previous inventors had attended to them, have rendered the steam-engine what it is in general use, in combination with those improvements in practical detail which long experience and continued manufacture of any article never fail to suggest and apply.

I now ask the reader carefully to note how every principle which is desirable in an engine and boiler is embodied in these inventions. We have vast extent of grate, great state of combustion, great extent of surface, water free from deposit, the best required, every facility for raising the pressure higher at which the steam is generated, a less tendency to priming, every facility for carrying out the safety-valve, dip, the engine and boiler of less weight, no steam blowing away at the safety-valve, supplies of water not required further than a few gallons per day to make up for leakage. In short, here is every principle requisite to the most safe, perfect, and economical steam-engine. Never did more sound principles combine to invite a fair trial than these inventions exhibit, and which, by the expenditure of a few thousands would reward the country by millions.

Take, for instance, a 500-horse marine boiler (on my construction), and when compared with a boiler of 500-horse on the present construction, the rendering force of the same pressure is not 1-50th what it is in the common boiler. The positive matter contained in my boiler is not ¼th that contained in the common boiler. The boiler being of a strictly tubular construction, should it become so much as the bursting of be set at liberty, either by shot or otherwise, it would act much like the bursting of a small steam tube. But such a result befalling the marine boiler now in use would carry destruction to all around it, even to the rendering the ship unseaworthy. My boiler of 500-horse occupies but one quarter the space, and is but little over a quarter the weight of the present boiler. The steam can be got up to 30 lbs. on the 300 lbs. on the inch, if desired, in 1-10th the time it can be got up to 30 lbs. on the 300 lbs. on the inch. The 500-horse-power, with my boilers and engines, can be got with the steam at 50 lbs. on the inch, and for any purpose desired. If we desire to pursue or get away from the enemy, or for any purpose desired, if we desire to be serious that is prevalent for the means of getting great power with little fuel of water and small consumption of coal, then here are such means. Such is the result of these inventions that the above is not an over-drawn representation. I have little doubt but that which, for a less offensive name, I will call the modern English philosophy will, as it has done by secret insinuation, represent me and my inventions as all twaddle. I warn the English people, that they will find it a "serious twaddle" if in the hands of the Russians.—May 8.

NEW BORING APPARATUS FOR ARTESIAN WELLS.—Mr. J. F. Mansel

of Lowell (Mass.), has recently patented an arrangement for boring wells, consisting of a boring cylinder with a cutter at its lower end, and an adjustable cutter on the periphery, for enlarging the hole, so that the auger cannot bind when in use; and that the tube intended to line the hole can easily follow the cylinder downwards, and allow the auger to be drawn up, by the shutting of the enlarged cutter. The patent also claims a metallic chain of buckets, in combination with, and operated by, such manner as to receive the earth as fast as it is cut from the ground, and raise it to the surface.

GOLD IN WALES—GREAT CAMBRIAN MINE.

Mr. Having received instructions from the committee of management of the Great Cambrian Mine to take from their gold lode 10 cwt. of auriferous quartz, for the purpose of testing its commercial value, I have much pleasure in forwarding you, for the benefit of those interested in the question of gold in Wales, the result of my trials, with some remarks upon the same. The lode from which the 10 cwt. of ore was taken is called No. 6, running east and west, about 4 ft. wide, and is a hard white quartz, with strings of clay-slate and iron pyrites disseminated through it. A level has been driven from the course of the lode, and has laid open the north side of it for about 20 fms.; 4 fms. from the forebreast gold is distinctly seen here and there in strings of quartz, of about 1/2 inch in width, with clay-slate on each side. At 3 fms. from the forebreast, on the north side of the lode, 10 cwt. of ore were broken down, showing gold in many places. I tried it in three ways—by smelting, by amalgamation, and by washing. The result given by smelting was 3 oss. 5 dwts. 12 grs. of fine gold to the ton of ore; by amalgamation, after calcination, 3 oss. 5 dwts. 6 grs. of fine gold to the ton of uncalcined ore; by washing, after being crushed to an impalpable powder, 3 oss. 1 dwt. 17 grs. of fine gold to the ton of ore.

To test the correctness of the foregoing results, I assayed the ore, and found 3 oss. 5 dwts. 14 grs. of fine gold to the ton. From the character of the ore, and the gold being unassociated with any other metal (a little silver excepted), there was not the least difficulty in separating the gold, both by chemical and mechanical means.

Although the results are so favourable, I do not believe the whole of the lode, if taken down from wall to wall, would give so good a result; at the same time, I think there is a certainty of its being found in paying quantities.

Mr. Calvert's assay of ore from the same lode, inserted in last week's Journal, being so widely different from the one I now give, I take the opportunity of saying that I am surprised the result of his assays did not give a much larger return, considering that the 233 lbs. of rich visible gold ore was broken down from many places, showing gold, and extending over 3 fms. It is possible to bring up assays to any amount. I have this week, from picked stuff, from the same lode, obtained at the rate of 420 oss. of gold to the ton of ore. To parade such and similar results before the public as evidence of the lode does harm, is deceit, and brings merited ridicule upon the subject.

Dolgelly, May 9. J. HARRIS.

NORTH BRITISH AUSTRALASIAN COMPANY.

Mr.—As you have opened your columns to a writer who, while professing to discuss the affairs of this company, has made your Journal the medium of personal discussion, you will, I presume, with your usual fairness, admit a reply. I allude to a letter which appeared in last week's Journal, signed "Scrutator." He states that every shareholder present at the meeting was satisfied with the account given of the Kawan Mine, and its future prospects. If so, I congratulate the shareholders on having escaped the mining mania of the last three years; for if they had been under the influence of that mania, I do not think they would have been so easily satisfied. For my part, having suffered somewhat from it, I coincide in the opinion expressed by "Alquies," that the Kawan Mine is swallowing, and has swallowed, a large amount of the shareholders' money. The prosecution of this adventure has hitherto resulted in a dead loss of nearly 50,000l., and we are now carrying on operations at a cost of 10,000l. a year, while our hopes and chances of profit are built upon the sandy foundation of a mining report.

Our mine being worked under the sea, the last production of ore was saturated with sea water, and underwent spontaneous combustion. This gave rise in my mind to the reflection; but being ignorant of mining as a science, I beg to ask the learned and well-satisfied "Scrutator," if he will ensure our mine from the same misfortune that ruined the hopes of the adventurers in West Wheal Alfred? which mine being filled with water, a powerful steam engine was erected to pump it out. Well, they pumped away with right good will for a considerable time, and at last they found—what? Why, that they had been trying to pump out the sea; that mine, like our mine, being contiguous to the sea.

"Scrutator" concludes his letter by stating that the question of remuneration to directors was discussed in an ungentlemanly manner; but what, he says, can be expected from those persons who delight in making themselves conspicuous, for the sake of displaying their oratorical abilities, &c.? It is for the shareholders present to decide how far this accusation is just. As one who took part in that discussion, I had no intention to give offence to the directors, and I thought the subject was discussed with as much delicacy as possible; but it was always awkwardly embarrassing to discuss the question of money remuneration in the presence of parties interested. Coming to a meeting with no other motive than to make the best of our solitary meeting in the year, to serve my own interests, and those of my co-partners, by eliciting information as to the state of our affairs, I did not expect to have such illiberal motives imputed to me by a brother-shareholder, for such an unbecoming attack could never have emanated from the directors.

As, however, the question of money has been raised, I cannot help expressing an opinion that, as far as I judge, the expenses of our London management are unnecessarily high. We have a year; the managers have cost 300l. more; we pay 300l. odd a year; our directors 400l. a year—and all for what? To register the proceedings of Mr. Mackay, in which all the talent of management really resides.

We want a secretary, of course, and we have a good and clever one; but I cannot conceive what we want with so many officials—it seems to be like overlaying the case with double management. If we have the talented management of Messrs. John Taylor and Sons, what can we want with a paid board of directors?

Needilly, May 9. INQUIRER.

BURSTING OF ANOTHER BUBBLE—THE ALBION GOLD.

Mr.—Your reporter was refused admission on Monday, the 30th April, to the meeting of registered shareholders (what a farce!) convened to consign this bubble to the "tomb of the Capulets," when a report was made, which is a perfect curiosity in its way, and, as such, I hope you will print it verbatim, as it is too good to be lost by curtailment:—

The directors of the Albion Gold Mining Company regret that, in meeting the shareholders on the present occasion, they have not a more favourable account to lay before them. They are desirous, however, of submitting to their co-adventurers a clear statement of the affairs of the company, and a full explanation of the circumstances which have attended the commencement and progress of the undertaking; also to lay before them the accounts and vouchers, properly audited, of the expenditure of the funds entrusted to their management, and to take the sense of the shareholders as to the course to be now pursued. This company, projected under flattering auspices, had to contend, from its outset, with two great difficulties, each of them at that time equally unforeseen: the one common to all companies, the other peculiar to this one. The first was the state of the money market, and the second, the depression in the public funds, upon the threatened hostilities with Russia, gradually changed to one of much difficulty. The other and peculiar disadvantage with which this company was beset at its commencement arose from the circumstance of one of the directors withdrawing his name, upon which the highly-respectable stockholders who had consented to act for the company, and another influential director, also withdrew. In this emergency, the continuing directors felt it to be their duty to insert in the *Times* and other newspapers an advertisement, which appeared in December, 1852, apprising the various applicants for shares of these occasions from the company, and intimating that any who might be desirous of withdrawing their applications were at full liberty to do so. The result of this was, that although the original applications for shares were more than usually numerous, and of a most substantial character, yet most of those which came from the connections of the seceding directors and stockholders, and many of those which proceeded from the general public, were withdrawn. The directors, however, felt that they had a duty to perform, and those who still remained faithful to the adventure in which they had embarked, and more especially as a large proportion of their subscriptions was already unavoidably absorbed by the heavy charge of advertising and those usual preliminary expenses which attend the formation of similar companies. As, therefore, any balance then remaining would necessarily have afforded the most trifling return, the directors resolved, after mature deliberation, to endeavour to carry out the contemplated undertaking, but in no event to require any further contribution from the original subscribers. By adopting this course they afforded to their co-adventurers a chance of recovering the sum they had subscribed, without incurring any loss. The object was, however, to be materially aided by an arrangement which was at that time enabled to make with the vendor of the Californian estate, who agreed to waive his right under the original contract, to receive a portion of the price in cash, and to accept the whole of it in shares of the company. But many weeks had not elapsed before the change which unfortunately took place in political affairs, and, as a necessary consequence, in the state of the money market, arising from the increasing probability of a war with Russia, threw great and unexpected difficulties in the way of this and all other similar companies. The directors were consequently induced, by the representations of an influential money agent and sharebroker, carrying on an extensive business in the City, to listen to his proposal for raising a large amount of capital to carry out the objects of the company, by procuring subscribers for an adequate number of shares; but that agent unfortunately failed to realise his engagements with the directors, and there can be little doubt that the increasing difficulties of the money market helped to occasion that failure.

During the year 1854, a favourable opportunity seemed to arise for retrieving the affairs of the company, and placing them at length on a more prosperous footing. The attention of mining adventurers and of the public generally was unexpectedly turned to the resources of our own country in the precious metals, and especially to the alleged gold deposits in North Wales, the extreme richness of which, and the extraordinary results of working them, at Dolfrwyn and other places: Merionethshire, were from time to time given forth in the public papers, and attracted much attention. An apparently eligible estate in the same vicinity having been offered to the notice of the directors, and the specimens taken from it having been submitted by them in May last to the test of Berdan's machine, they were found (like many other similar mines, near Dolgelly, in that machine about the same time) to yield a very large return of gold, in some instances upwards of 2 oss. to the ton. The directors were, therefore, induced to enter into a contract for the purchase of this property for shares in the company, which appeared to offer a favourable opportunity for carrying on the operations of the company with the most advantageous results for the shareholders. Suddenly, however, the acuteness of the machine and its crushing powers were openly called in question, and all the hopes which had been raised by the highly encouraging result of the trials thus made vanished. The ultimate failure of the great experiment at the Cwmllynfell Mine, near Dolgelly, where four of these machines were erected, and sixty miners were constantly employed in reducing the quartz, settled the question, and deterred your directors from venturing to incur a further outlay in that quarter.

The funds originally subscribed being thus exhausted, and no rational prospect of profitably working for gold presenting itself, with the example before them of other companies which have in vain expended a capital of above 100,000l. each in erecting machinery and obtaining gold, your directors, in prudence, can recommend to their co-adventurers no other course than to dissolve this association, with the positive assurance that should the sale of the property of the company produce a sum insufficient to pay the debts now due, the directors assume to themselves the burden of providing for them, whilst any surplus which may possibly arise from such sale, after paying such debts, and the expenses of closing the concern, the directors will take care shall be, without delay, ratably distributed amongst the registered shareholders.

In the course of the proceedings, it was (amongst other things) unanimously resolved—"That this company be now, and that the same is hereby, absolutely dissolved, subject to the steps necessary to close the concern." And that the trustees be appointed a committee, "to sell and realise the proceeds of the property and effects of the company with all convenient expedition, to pay the outstanding debts, and to divide the surplus funds (if any) ratably amongst the registered shareholders, or their representatives."

That part marked in italics is perfectly inexpressible in equity. The directors punish the holders of the 1900 shares, who stuck to their colours out of the 50,000 shares, by absolutely taking the 1900l. at once for advertising and preliminary expenses. A cooler proceeding has, perhaps, never been heard of. The vendor of the Californian estate (where it is) took shares of the company (how many did he get?) and sold them for what they would bring, from 7s. each down to 4 1/2d., therefore adding needy people with waste paper, whilst they imagined they were buying scrip

which represented it, paid, and which then could only possibly have been deteriorated a few shillings. It is impossible to apply but one term to such proceedings. John Bull, however, will never be cured, and he rather admires the cunning by which he is generally plundered, than sympathizes with the exposer and detector of it; whereas the latter terminates his campaign against the gold mining bubbles with the most perfect contempt of their apathy in not rising en masse to support a movement which would have caused much disorganizing. I have, however, playfully laughed people out of them, and as a warning that higher game is now being tried, conclude with the first line of a popular song—"I know a bank, whereon," &c.,—

Glasgow, May 19. H. GUDALL.

THE COPPER TRADE—ENGLAND AND AMERICA.

Mr.—From an analysis of a report, contained in your Journal of the 21st April, upon the copper ore imported into Liverpool during the first three months of the current year, it appears that 830 tons and 4199 bars came from the United States. Of this amount 382 tons came from the State of Tennessee, and 438 tons and 4199 bars from the State of Michigan. The *Medallion* and *Eli Whitney* are each reported to have brought 55 tons; they each brought 100 tons, the produce of the Hiwassee Mine. The parties who supplied you with the information upon which your report was founded must have greatly understated the amount of ore imported; for 182 tons of copper ore during three months, divided amongst the Tennessee, the Isabella, the Polk County, the St. Mary's, the Hancock, and the Eureka Mines, is not worth all the rhodomontade that has been written about their powers of production and rapid development. Those who state that certain mines in the State of Tennessee are sending from 200 to 300 tons to market monthly, either talk nonsense, or design to mislead your readers, having some ulterior object in view. There may be one or two mines capable of bringing that quantity of ore to the surface, but there is not one that can bring it continuously to market.

Exaggerated statistical statements, the opinions of learned professors, and the reports of mining captains, are set forth to attract attention, but the art of puffing is too well understood in America to meet with much success; and hence touters and schemers, with promises in one hand and scrip in the other, cross the Atlantic to dispose of property some 4000 miles from the spot where it is most likely to be thoroughly appreciated. "Distance lends enchantment to the view" of mining enterprises in America, but not of English money sent to develop their resources.

If these gentlemen would recommend their stock to the consideration of English capitalists, they must adopt a very different course of proceeding to that which has hitherto distinguished the direction and management of mining property in America. They must make their mines pay by economy, good judgment, and open competition; and they must prove their successful operations by reference to a fair balance-sheet on the close of the year; they must not continue to amuse themselves and weary the public by the repetition of oft-repeated promises they never expect to see fulfilled; indeed, know to be impossible of accomplishment.

When the rich deposits of nearly pure copper were discovered in the State of Michigan, there was a rush to "them diggings," and no less than 50 enterprises suddenly started into life, all full of promise, all certain to yield a rich harvest. Only one of all these, the "Cliff Mine," has paid a dividend.

In 1850, a few gentlemen in New York employed a Cornish miner to search for copper ore in Polk County, Tennessee, where government indicated its existence; and he discovered the Hiwassee Mine. Here, again, as some 12 or 14 years previously in Michigan, a crowd of needy adventurers hastened to obtain possession of the land adjoining the tract they purchased; and, subsequently, scarcely a month has passed away without ushering into existence some new mine, more promising and richer than its predecessor.

The mines in Tennessee are not so favourably situated as those in Michigan, and there is no likelihood of their being worked to greater advantage. A consideration of the difficulties attending the working of the new mines I must reserve for future communication; under present circumstances, less than 12 per cent. ore will not bear the expenses of transport to market.

Under proper management, the Hiwassee Mine might be made to pay 18 or 20 per cent. upon 200,000l. for many years to come; it has hitherto paid its way, but it has paid no dividend. On the issue of its fourth annual report, I may find occasion to make a few remarks on the wanton extravagance and palpable incompetency of its board of directors.

The Tennessee Mine also promises well, and it has an advantage over its neighbour, the Hiwassee, inasmuch as it is under the control of gentlemen who have no collateral projects to divide their attention against its fair development. These two mines do not require the aid of touters and schemers; in due course of time they will merit and obtain their fair share of public attention.

Periodical and well-authenticated reports on the importation and sale of copper ores at Liverpool would tend to encourage that branch of trade. There is no direct communication between Swansea and ports on the American shores, and in America the idea prevails that Swansea is the only place where copper ores are sold in this country; consequently, those who are interested in the disposal of mining produce on the other side of the Atlantic are deterred from sending it, under the apprehension of a trans-shipment to the expense of a long voyage, or extravagant direct freightage.

The length of my letter can only be excused by an earnest desire to diminish, as far as in me lies, the number of—

VICTIMS OF MISPLACED CONFIDENCE.

London, May 9.

WHEAL TREFUSIS—AND ITS MANAGEMENT.

Mr.—In no unfriendly spirit, I wish to offer a few criticisms upon this mine, and which I would address personally to the manager, but that his replies would benefit no one but myself, and I am desirous that the London shareholders, who have no means of satisfying their anxieties, beyond the very meagre report published weekly in your Journal, except by a journey of nearly 800 miles, at great expense, or the employment of a captain to inspect the mine, at a cost which, if frequently repeated, becomes a burden.

This mine, which is admirably supplied with pumping and dressing machinery, and, as captains would say, well laid out, has been at work for some years, and something more than 10,000l. to 12,000l., exclusive of the value of ores sold (some 3000l. or 4000l. more), have been spent upon it, yet the deepest point attained up to the present period is only 4 ft. 6 in.

The discovery of some very good tin ground on one or two of the lodes has enabled the mine to return a fair proportion of the cost, but the workings on these lodes have been confined to a 10 ft. level; and it is but a week or two since that the flat-rod shaft, at Reynolds's, which has been at a standstill for months, has been set to sink below the 10 ft. level.

Such was the position of this mine (which contains numerous well-defined lodes, and in a highly-privileged locality), until last autumn, when the success of Ciljiah and Wentworth, the adjoining mine, suggested to the captain the propriety of sinking a trial shaft, near the boundary, on what was presumed to be the same lode as Ciljiah was opening on. This experiment was successful; and at 26 fathoms from surface, the lode was cut west of the cross-course, and found to be worth from 1 to 2 tons per fathom; and it was afterwards cut east of said cross-course, and there was worth about 2 tons of copper ore per fathom. The driving was continued westward some 7 or 8 fathoms, and then stopped, there being but about 16 fathoms to boundary; but the level has been driven eastward a considerable number of fms., varying in value from 1/2 to 3 tons per fms., and stated from time to time to be opening good tribute ground. The shaft was again set, and in 6 fms. further sinking the lode came into the shaft (Feb. 25th), was cut, and found to be worth 2 tons per fms. from the surface to the level of the shaft, and the remainder of the shaft was found to be "down." From this date to the present, a period exceeding two months, not a syllable has been said about the shaft, though one would suppose that a point of so much interest and promise would be referred to now and then, for the satisfaction of distant shareholders, whose only business, one might infer, was to pay calls.

Further, as far back as the middle of March, some 25 to 30 tons of undressed black and yellow ore had been hauled to the surface from this part of the mine, and some small quantity was dressed; in the early part of April some pitches were set on these lodes, and shortly afterwards were reported to be doing well; but to the present moment not an ounce of ore has been sampled, and a perfect silence upon the progress of both the pitches and dressing has been maintained.

Towards the shareholders resident near the mine this may be no injustice, since they can visit the works without inconvenience, and satisfy themselves as easily as I can my curiosity as to the progress of things at the Crystal Palace; but is it fair for a captain, who receives the largest portion of his salary from the London shareholders, to maintain silence upon topics in which they are so deeply interested? Holding, as I do, that it is not, I trust that these remarks may elicit the required information, and tend to make the future reports of this mine a full, as well as a true, reflection (which they no doubt are, as far as they go) of the real state of this promising concern.—May 11.

PRO BONO PUBLICO.

HOPKINS'S GEOLOGY AND MAGNETISM.—No. III.

OF MINERAL VEINS—THEIR FORMATION, GENERAL CHARACTER, AND CONTENTS.

Cross-courses, generally speaking, supply the active mineralising agents, such as the phosphoric, carbonic, and other acids, and the rocks provide the elements and the alkalies; the compounds are formed only at the points where the metallic ores come out. Thus, a rock which may be very favourable for the formation of ore may not indicate the presence of the mineral by impregnation, or in a state of aqueous dissemination. Again, it often happens that a compound is formed by the aid of several elements, brought together from different points, similar to the gradual formation of the trunk of a tree; the distinct elements of which are brought from the soil by the conducting power of the roots. The seed, with its active principle, being the fixed point, causes the first action on the elements surrounding its immediate neighbourhood; the plant increases in bulk, and becomes more powerful, until the required elements are abstracted from the soil. This deficiency becomes by rain, or aqueous saturation, replenished, and the tree increases in magnitude by the constant supply; and such are the local effects of mineral crystallisation.

The formation of a crystal wall causes a local alteration towards it of similar elements; and, however slow this process of metalliferous aggregation may appear at first, yet the decomposition and the crystallisation of the separate elements become by degrees very powerful, from that respective cohesive forces, and these forces increase in energy proportionably to the increased bulk. The different elements, by separation, will cause new combinations and arrangements, till they arrive at a comparatively quiescent state, the whole of the contents of the bounding rock being abstracted prevents further metallurgical accumulation. This is the case with many of our great mines; the rocks in which the rich veins are enclosed are like exhausted soils, having all the nutritious elements drawn out. Again, the reason why cross-courses are so important for the enrichment of a district, and yet poor in themselves, is evident, inasmuch as they are only the irrigating channels, bringing in active chemical agents to combine with the elements of the rock to form the minerals; and as they are constantly in a state of activity, filled with strong solvents, no important mineral crystallisation can take place in them under such conditions.

The greater the degree of metallic saturation, especially iron and arsenic, exposed to the permeation of acids and salts, the greater is the degree of mechanical and chemical disturbances, and the heat produced, and also the local accumulation of minerals. These frequently give rise to mineral and thermal springs, and some subterranean deposits, which are only the result of the action of the solvents, and the mineral may lose its argentiferous contents by an excess of sulphate of iron dissolving the silver, and this metal may be precipitated in another joint on a barren rock, or any other substance, and thus form a vein of silver in the neighbourhood of a copper lode. The power of the ordinary spring-water to dissolve the hardest rock is much greater than is generally supposed. Small streams in the course of time perforate and groove basaltic rocks, as is frequently observed in the ravines of South America. All substances become dissolved in the course of time in the ordinary temperature of the subterranean liquids. Sulphate of baryta, a substance very common in lead

• An illustration of the great mechanical power produced by a seed growing into a tree in the crevices of a strong wall, may be obtained in the ruins of old abbeys. The strongest walls, and even rocks, have been disturbed and broken by the growth of trees.

• Herland, Dolcoath, Crinilis, and other copper mines, have produced silver under such circumstances.

mines, has been termed insoluble, although found in such state as to leave no doubt of its being deposited from solutions. In some districts on the Continent (Prussia), we find the indications such as to warrant the supposition that the baryta came from one direction, whilst the lead came from another; the combination of the two producing the desired effect.

(To be continued.)

Meetings of Mining Companies.

THE DEVONSHIRE GREAT CONSOLIDATED COPPER MINING COMPANY.

The eleventh annual general meeting of shareholders was held at the office of the company, Gresham House, Old Broad-street, on Wednesday, the 9th inst., Mr. W. A. Thomas in the chair.

The following report of the directors was read:—

The report and balance-sheet prepared by the directors of Devonshire Great Consolidated Copper Mining Company, for the eleventh annual meeting of the company, present a highly satisfactory retrospect of operations during the past year. The uniform method adopted in making up the accounts leaves little for explanation. In order, however, to facilitate a comparison with the last year's balance-sheet, the directors beg to call the attention of the shareholders to the following facts:—The quantity of ore sold has been less by 1452 tons 15 cwt. 1 qr. than the previous year; at the same time, the money received has been only 1929l. 17s. 7d. less; showing that a higher price has been obtained for the ore by 6s. 4d. per ton, the average produce of the ore being the same—viz., 67-10ths.

The price of copper metal has not varied throughout the year. The actual receipts have been less, and the expenditure has been less also, notwithstanding an increase in the poor's rate and income tax, which has enabled the directors to declare dividends amounting to 8s. 3d., and to add to the current cash balance in hand. The directors have the satisfaction to report the erection at Mill Hill, by the Duke of Bedford, of 24 cottages, an instalment of that accommodation so necessary to the moral and physical welfare of the miners.

The price of some of the material of large consumption has fallen; at the same time, the directors cannot hold out any prospect of a reduction of the cost of labour so long as the high price of provisions is maintained; miners are, however, much more plentiful than for some time past.

Capt. James Richards has, as usual, given a detailed report on the mines, by which it will be observed that the large sales of ore have not caused any diminution of the reserves in the mines. The explorations at the Maria Mine have been carried as far as indications justify—the ungenial stratum of the Capel Tor Rock having passed through the lode and split it into branches, any profitable results from extended operations are entirely problematical; moreover, to continue them would involve the necessity of an increase of steam-power. The present engine will be now devoted to the steam grinders is completed, and a most satisfactory trial was made on Saturday last. The well-arranged dressing floors are also a state of forwardness, and the turning of the heap of barytes will commence forthwith. It is expected, with the adequate supply of water from the River Tamar, upwards of 2000 tons of ore may be annually dressed and prepared for market.

The only contemplated requirement of additional steam or water-power is at Agnes shaft, where a magnificent course of ore offers inducement to a vigorous development. In conclusion, the directors have much satisfaction in congratulating the shareholders on the results of the past year; which they trust, with the elements of success possessed in their valuable mines, will be continued year after year.

The services of the directors, auditors, and others, will be continued for re-election; and the directors have expressed their willingness to serve, if re-appointed.

Balance-sheet of the Devonshire Great Consolidated Copper Mining Company, from March 1, 1854, to March 1, 1855.

RECEIPTS.		
Balance from last account	£15,210 4 3	
Carriage of ores outstanding per last balance-sheet, since received	1,023 12 10	
Sales of copper ores sampled from		
Jan. to Dec., 1854, both months	£142,248 18 4	
Inclusive:—22,926 t. 4 c. 1 q.		
realising	9,800 7 6	£152,049 5 10
Carriage of ores same	883 9 3	131,465 16 7
Product amount of carriage outstanding March 1, 1855		12 0
Fees on transfers of shares and certificates		103 15 0
Interest on Exchequer Bills		105 14 0
Interest on money lent		686 0 0
Income-tax deducted from dues on copper ores		1,068 15 7
Total		£168,574 15 11

EXPENDITURE.		
Mines' cost, from Feb., 1854, to Jan., 1855, both months inclusive		£64,861 19 11
Dues on copper ores sold from Jan. to Dec., 1854, both months inclusive		11,683 12 0
Timber imported for use of the mines		6,486 7 5
Iron purchased for use of the mines		2,580 1 1
Water rent: one year to Michaelmas, 1854, less property-tax		63 4 7
Expenses of the Tamar Fishery		1,091 3 1
Poor's rate and other taxes at Tavistock		2,191 6 0
Income-tax: one year to Michaelmas, 1854, less property-tax		100 0 0
Sum voted at the annual general meeting, held 1st May, 1854, for the promotion of the education of the children of the miners employed at the Devon Great Consolidated Mines		600 0 0
Compensation to the resident director at Tavistock, 1 yr., to Dec. 31, 1854		2716 15 0
Expenses in London:—Salaries of the secretary and clerk, rent of offices, stationery, postages, printing, receipt stamps for dividends, &c.		442 0 0
Compensation to directors and auditors, one year, to March 1, 1854		1,158 15 0
Dividends paid, 5 1/2 per share, on 1024 shares		58,368 0 0
Balance:—Cash at the bankers in London		£1,054 16 2
Money at interest on call		6,000 0 0
Cash and stamps in the office		21 15 0
Cash at Tavistock		200 0 0
Bills receivable		11,689 3 4
Total		£168,574 15 11

General Statement of Liabilities and Assets, from March 1, 1854, to March 1, 1855.

LIABILITIES.		
Shareholders' capital	£12,024 0 0	
Mines' cost for February, 1855, including merchants' bills	4,944 10 10	
Dues on copper ores:—		
Sold 15th January, 1855	£830 6 7	
Sold 22d February, 1855	891 15 4	2,494 11 11
On ore sampled 1855, February, 1855, estimated at	773 10 0	1,431 17 0
Income-tax, half-year, to 25th March, 1855		187 0 0
Water rent, half-year, to 25th March, 1855		450 0 0
Poor's rate, one quarter, to 25th March, 1855		450 0 0
Messrs. Nicholls, Williams, and Co.'s draft, on account of cost of steam cracker erected at the mines, due 23d June		200 0 0
Balance due on account of the same		450 0 0
Salaries, rent of offices, &c.		109,054 4 4
Balance carried down		£121,080 0 0

ASSETS.		
Wheal Maria	£6,600 17 0	£591 9 6
" Fanny	2,261 3 2	1,140 8 0
" Anna Maria	10,778 5 11	2,673 11 0
" Josiah	13,544 6 6	2,281 18 6
" Thomas	3,148 10 6	1,078 12 0
South lode	1,279 3 0	216 17 0
Wheal Fremontor		210 10 0
In store at the mines:—Iron, brass, steel, powder, coal, rope, nails, candles, &c.		4,410 14 6
In store at the quays:—Timber, coal, and iron		3,051 10 0
Copper ores raised in January, and sold 22d Feb.		£11,806 19 3
and carriage, 2407 tons 12 cwt.		10,113 13 9
Copper ores raised in February, and sold 22d March, and carriage, 1662 tons 3 cwt.		16,034 6 8
Copper ores and halvans at surface, computed 4448 tons, less dressing cost and dues		3,304 0 0
House at Bereaure, near Tavistock		100 0 0
Office furniture in London		683 15 0
Amount outstanding for carriage of ores, per balance-sheet		1,688 15 11
Exchequer Bills in hand, 5000l.—Market value 1st March, 1855		18,965 14 11
Balance, as above		£121,080 0 0

Total. Balance brought down. £109,054 4 8

A report on the mines, drawn up by Capt. James Richards, the principal mine agent, was read, to which was appended an estimate of the quantity of ore in reserve in the mines, amounting to 72,700 tons. The report appeared to give satisfaction to the shareholders present, and resolutions were passed adopting the report and accounts, re-electing the retiring directors and auditors, and other routine business.

WHEAL ZION MINING COMPANY.

The quarterly general meeting of shareholders was held at the office, St. Nicholas-place, on Wednesday, the 9th inst.,—Mr. TINGLE in the chair.

Mr. PRET (the secretary) read the notice convening the meeting, the minutes of the several committee meetings, and the last quarterly one, which were confirmed, and the following report from Capt. Bray and Sims:—

The present prospects of the mine, we are happy to state, are far better than at the last general meeting. The engine-shaft has been sunk 4 fms. 4 in. on the course of the lode, which makes a total depth from surface of 80 fms.

driven west 3 fms. on the course of the middle lode, which is 3 ft. 6 in. wide, composed of spar and malleable, with saving work. The 30 fm. level has been driven 5 fms. 4 feet east on the course of the lode, which is 3 ft. 6 in. wide, and has produced 2 tons of ore per fathom. The lode in the present end is not quite so good as it has been, and now contains a great deal of spar, prismatic, and copper ore, yielding from 1 to 1½ ton per fathom. Richard's shaft has been sunk 4 fms. and communicated with the 50 fm. level, where we cut a tip-plate. By this communication the mine is well ventilated; this shaft has been suspended for the last two months, in consequence of such an increase of water: in order to sink this shaft we must connect a line of flatrods from the present engine, and fix the necessary pitwork. The number of fathoms of ground excavated during the past quarter was 75 fms. 2 ft. 3 in. In addition to the foregoing work, the walls of the new engine-house are erected, and we hope to put on the roofing this week, so that we may be quite prepared for the engineers: owing to the severity of the weather in the commencement of the year, our progress in this department was impeded for two months. We have made a large reservoir to receive the water from the engine-shaft, by so doing we shall be amply supplied with water for our new engine, and all our dressing operations, which we hope will be very extensive. We have had two tribute pitches working in the past quarter, which have yielded 15 tons of ore, and have sold during the quarter 34 tons 6 cwt. of ore, amounting to 117½ tons. We have 40 tons of ore at Calstock, which produced 98 per cent. for copper, and hope to prepare 30 tons more, worth 2½ lbs. per ton, by Friday next, our sampling day. We have let three tribute pitches, two in the back of the 50 fm. level, and one in the back of the 40 fm. level, which are producing a moderate quantity of ore.

A subsequent report has been received from Capt. Bray and Sims, confirming the above, and stating that the necessary erections were complete, and only waiting for the engine.

The following statement of accounts was submitted:—	
Cash in hand last account	£ 73 19 9
Calls	665 8 0
Ore sold	121 12 4 = £861 0 1
Labour cost—December	£235 18 8
" January	213 3 4
" February	275 8 1
Discount and commission	0 7 5
London expenses, secretary, &c.	60 18 0
Travelling expenses to mine	5 0 0
Cash in hand	30 0 7 = £861 0 1

In the notice convening the meeting, the statement of liabilities and assets showed a balance of calls in arrears, 668½ 10s., but they had since been reduced to 277½ 10s. The liabilities against the mine amounted to 278½ 11s. 10d. over assets, against an ore bill due in a month of about 200l. The March cost, which had been estimated at 300l., from unavoidable expenses connected with the surface erections, had been 410l. 6s. 10d.

In answer to enquiries, Mr. STUMPS stated the engine must be erected and working by the 17th June, or the engineers (Messrs. Nicholls and Co.) would have to forfeit 10l. per week until completion. Some proprietors having also enquired why the dressing-floors were not in a more forward state, it was explained that Capt. Isaac Richards, of Devon Great Consols, who was considered as one of the most experienced agents in the county in the dressing department, would be consulted for assistance, and there was ample time to complete them before the engine went to work.

Mr. BRYMAN said it was highly satisfactory to state that Capt. Isaac Richards had joined Wilmot Adams, having purchased 25, and subsequently 50 shares, at something above market price; and he was informed that Capt. Richards had observed that there were thousands of tons of ore, which would work away at a large profit. It was tolerably certain that an agent would not purchase in such a mine unless he entertained a favourable opinion of the results.

With respect to forfeiting those shares in arrears of call, it having been suggested to bring sections in the Stannaries Court, Mr. PEARCE related a circumstance where a company were involved in expenses to the amount of 300l. for bringing such an action on shares not worth three farthings; and it was resolved that application should be made to the holders of all shares in arrears, stating that, unless the call was paid in 14 days, their names would be given to a merchant to whom the company was indebted. (We trust the Stannaries Bill, just passed the House of Lords, will remedy this state of things, and recommend the pursual of a leading article on the subject in another column.)

The reports and accounts were then received; a call of 5s. per share was made; the committee were re-appointed, with the addition of Mr. Smith; thanks were voted to the chairman, secretary, and agents; and the meeting broke up.

TINCROFT MINING COMPANY.

A general meeting of shareholders was held at the company's offices, Moorgate-street, on Thursday, Mr. F. D. Hadow in the chair.

The advertisement convening the meeting having been read, the following report was submitted:—

Your directors, in laying before you the accounts for the year ending 31st of Dec., 1854, have to state that they have met with great difficulty in putting them in a clear and intelligible shape. You are aware that your directors only took charge of your property on the 14th of Feb. last, when they found that the books had not been regularly written up for many months previous to the end of the financial year. A regular system to the balance-sheet, as prepared by the auditors, will exhibit a loss of 1786½ 4s. 4d. in the working of the mine for the twelve months ending 31st of Dec., 1854, against the working of 1077½ 10s. has been received on account of the fifth call. A supplementary account, made up to this day, exhibits the present position of affairs.

Your directors have to inform the meeting that 765 shares have been declared forfeited at a board meeting, held on the 9th of April last, in conformity with the regulations endorsed upon the scrip, in consequence of the non-payment of the calls thereon, notwithstanding repeated notices of forfeiture have been inserted in the public press. Since that period 60 shares have been restored to the holders, on payment of the calls due and interest thereon; application to restore others have also been made, which will be entertained by the directors; but it is the intention of the directors to advertise the numbers of the remaining shares at an early day, after which they will be absolutely forfeited, and sold by auction. Since the last meeting the vacant seats in the direction have been filled by the election of Mr. W. Dunsford and Mr. Mackay, late one of the auditors of the company.

Subjoined is an abstract of the balance-sheet to the 31st Dec., 1854:—	
Balance last account	£ 1,973 0 10
Mine cost, 12 months	33,222 5 4
Interest and discounts	169 9 3
Disbursements	188 9 9 = £35,553 5 2
Sales of tin and copper	£26,175 13 0
Ditto of engine	382 0 0 = £26,557 13 0
Leaving balance against mine	£ 8,905 12 2

The CHAIRMAN moved that the report be adopted; he had nothing very material to add to it. The accounts which had been received from the former board had not been brought up, and the present directors had had to contend with very great difficulties indeed. The four or five months which ought to be mentioned. They found themselves in a position with regard to the local management which could not be allowed any longer to exist; they must, therefore, appoint some person of practical experience to superintend the underground work, and check the accounts. If that were done, the directors had reason to hope that the mine might yet be brought round, so as to become remunerative to the shareholders. Mr. Pryor, whose knowledge of mining was, he (the chairman) believed, very extensive, and who had considerably increased his interest in the mine since the last meeting, being now a holder of a sixth of the mine, had offered to superintend the underground working for a mere nominal remuneration until the mine should be brought round; and looking at Mr. Pryor's respectability, and his vast practical knowledge of mining, there could not be a doubt that his services would, if accepted, prove highly advantageous to the general body of shareholders. Mr. Pryor had treated the matter most liberally, and was not only a practical miner, but he (the chairman) had been given to understand had himself originally in Tincroft Mine. It was most essential to the interests of the company that an underground manager should be appointed; for let the directors exercise as much care and interest as they could, they were entirely at the mercy of the people in Cornwall, and before the mine could be brought to a remunerative state there must be a general and most effectual clearing out.

Mr. HODGSON should like to know whether Mr. Pryor was not a mining merchant? The CHAIRMAN said that on that subject he was not able to give a positive answer; but Mr. Pryor was quite willing to leave the ordering of all the stores to the directors. Mr. HODGSON said he should feel that he had not done his duty if he did not speak very fully on that point.—The CHAIRMAN: I hope you will.

In answer to a shareholder, the CHAIRMAN said the ore sales for March would be about 1100l., but that sum was not included in the supplementary account, because they were not quite certain as to the precise amount.

The report and accounts as made up to the 31st of December, 1854, were then received and adopted.

Mr. HODGSON then contended at considerable length that the balance against the mine would have been 779l. only, presuming the forfeited shares had been sold, and the calls had been paid. The directors had the power of forfeiting those shares, and they ought to have forfeited them, and have made an asset of it.

The CHAIRMAN thought the hon. proprietor was raising a question about nothing. Mr. HODGSON then referred to the appointment of a Cornish merchant as a matter to which the directors had given their best attention.

Mr. HODGSON observed, that when he attended the meeting at the London Tavern, he said nothing; he reserved himself. (A laugh.)

The CHAIRMAN thought the honourable proprietor was making up for it now; but it was difficult to understand what he required, or what was the precise nature of his complaints. He (the chairman) would be very happy to give him any information, if he would only make himself understood.

Mr. HODGSON said he was not inserted in the supplementary account? The CHAIRMAN replied, because it was not paid.

Mr. HODGSON asked if there was nothing paid on the new call? The CHAIRMAN said the call was not yet due.

Mr. HODGSON said he would leave the accounts where they were; for a more enlarged set of accounts—had as they were at Salvador House—had been never seen.

The CHAIRMAN remarked that such a statement was utterly unworthy of notice. Mr. HODGSON then proceeded to address the meeting upon the subject of Mr. Pryor's appointment. He strongly objected to the appointment of a Cornish merchant as a manager or purser. Mr. R. B. Mitchell was appointed purser, and sold coals to the directors. He (Mr. HODGSON) opposed Mr. Mitchell's appointment, and they elected Mr. Pryor to drive the coach, he would drive it into his own counting-house. No Cornish merchant could do the company any good there; and he asked them to find a man with a London feeling, instead of a Cornish merchant. He had been for many years connected with Tincroft, and he knew that it was a very difficult mine to manage.

The CHAIRMAN said there was nothing in the former management that would induce the directors to follow it in any respect. Mr. HODGSON, as he had a right to do, had expressed a very strong opinion upon the appointment of a Cornish merchant as a manager, and his notion seemed to be that a Cornish merchant would play his own game. He (the chairman) thought there was nothing in Mr. HODGSON's remarks which called for an answer; but, as Mr. Pryor was present, he would, perhaps, speak for himself.

Mr. HODGSON wished it to be understood that he had neither said nor intended anything personal.

Mr. PRYOR said that in Cornwall, as in London, it required a man to look after business who understood his business. They would not expect a banker's clerk to know much about mining, or a miner to know much about banking; every man should be acquainted with the duties which he was called upon to perform. It was

quite true that he (Mr. Pryor) was now a merchant, but he had worked underground as a miner, and in Tincroft Mine. He had never seen a mine in a worse state—a mine that he had been carried on was not to be found in Cornwall, even before Mr. Mitchell was appointed as manager, but Mr. Mitchell knew no more about the working of a mine than Mr. HODGSON; Mr. Mitchell never worked underground a day in his life, and he should hardly think Mr. HODGSON had ventured down a mine many times in his life, and if he had occasionally visited Tincroft, his knowledge of mining was not worth much. A mine to be well conducted should be under the management of some one who was practically acquainted with mining, and in whom the shareholders could place confidence. It was of no benefit to shareholders the directors going down a mine in their white kid gloves; such gentlemen could hardly be expected to know anything about the practical working of mines.

Mr. HODGSON interposed: he wished it to be understood that he had never gone down in white kid gloves. (Laughter.)

Mr. PRYOR had not charged Mr. HODGSON with such an absurdity; all he had said about that gentleman was, that his knowledge of mining must be extremely limited. As for the management of Tincroft, he could assure Mr. HODGSON that he would not touch it if he did not hold a sixth part of the mine. He did not want their salary, nor did he want their appointment, but he wanted to see that things were properly managed, and very differently managed to what they had been hitherto, or where at present. As for his being a merchant, all that he could say was that he never supplied any mine which he had the management of with materials. It was for the shareholders to do as they pleased, but he could only tell them that if this mine was not conducted with great economy it would never become remunerative.

The CHAIRMAN said it was quite apparent that it was most important to appoint some person of experience and character to go down and manage the mine as underground manager. Mr. Pryor had stated that he was willing to undertake the management of that department, and that he did not wish to have a voice in ordering the stores. Mr. HODGSON had just told them that such were Mr. Pryor's engagements, that he would be at Cornwall to-day and in Cornwall to-morrow; but he (the chairman) understood Mr. Pryor resided at Cornwall, and he was satisfied he would put things in a much better position than they were at present. He (the chairman) would tell them they could not go on unless they had a thorough clearing out at the mine.

Mr. WILLIAMS observed, that although Mr. Pryor was a Cornish merchant, he would not stand in that position with this company; all he would have to do would be to see to the mining operations, and it was impossible, he thought, to find any one better qualified.

The CHAIRMAN observed that, by arrangements made by the present board, they would now get their coals—which was a very large item of expenditure—at half the price they were paying formerly. The late board thought nothing of taking a twelve-months or two years' credit, and were supplied with a worthless article.

In answer to a question, the CHAIRMAN said there were certain shares which must be forfeited, and which would be previously advertised, and when the shareholders met again he hoped it would be found that the mine was progressing; but looking at the state in which everything was when the present directors were appointed, it was hardly to be expected that anything could be done of once.

The appointment of underground manager was left to the directors; and, after a vote of thanks to the chairman, the proceedings terminated.

AGUA FRIA GOLD MINING COMPANY.

The adjourned general meeting of shareholders was held at the offices of the company, Old Broad-street, on Monday,

Professor ANSTED in the chair.

Mr. VIAN (the secretary) read the notice convening the meeting and the minutes of the last, which were confirmed.

The CHAIRMAN said that the result of the week's delay, for the settlement of the question giving the shareholders a chance to come in upon better terms, had been most satisfactory, as they had now 10,560 shares subscribed for, being 360 above the minimum proposed for carrying on the works. The directors were, consequently, prepared at the same time, they were desirous of giving every shareholder an opportunity of subscribing until the full amount (15,000l.) was raised, as they ought to have some margin to meet little delays or temporary mishaps. Application for the remaining 440 shares would, therefore, remain open until Saturday next. Although the directors had received no direct information from California, they had heard incidentally from a partner of a house in San Francisco, to whom the gold was remitted, that Mr. Hepburn had determined upon sending gold to the mint, and diminishing the expenses as much as possible; this clearly proved that gold had been procured from the heavy rains that fell from Grass Valley to San Francisco; and he (the chairman) had little doubt but that the despatches had been forwarded by Mr. Hepburn, but failed reaching San Francisco in time for the mail. So far this might be considered satisfactory. He would also refer to a report by Mr. Seaton, of the Rocky Bar Mining Company, which stated that quartz mining was more flourishing, and considered that the Agua Fria Company would have been yielding a good profit, if they had not made it a mammoth establishment. Of course they would take these reports for what they were worth; but he mentioned them in confirmation of the statements which had been published from time to time of the operations of this company.

A SHAREHOLDER wished to know the number who had agreed to subscribe for the debentures?—The CHAIRMAN replied that the applications were 118; but it was spread over a much larger number, as several brokers had applied for eight or ten clients, so that the number might fairly be estimated at from 150 to 200.

Mr. GODDARD said some of the shareholders present wished to know whether the bonus would be paid out of the first available assets?

The CHAIRMAN replied that the plan generally adopted was to pay the interest out of the first available assets, and the bonus with the principal; but the whole of the debt, with the bonus, must be paid off before any dividend could be declared for the original shareholders. As there were liabilities to be met, he would propose that the amount on the debentures be paid on or before the 15th inst., and that a circular to that effect be sent to the various proprietors, who had agreed to subscribe.

A SHAREHOLDER said that, according to the statements that were published from time to time a profit was sometimes made, which appeared to be absorbed in capital. He thought such a state of things ought not to continue, as the shareholders were frequently changing, and the present proprietors would not reap the benefit they ought. The CHAIRMAN said there was a difficulty at the commencement of the operations. It had been clearly proved that the profits had exceeded the working expenses, and in future it was expected that a distinct account would be rendered, as instructions had been sent out to Mr. Attwood upon the subject.

Mr. VIAN explained that a profit had, on several occasions, been made; but the amount of gold obtained was sent with the report, and the statement of accounts was not received for perhaps a month afterwards; however, as the works might now be said to be finished, the net profit would in future be distinctly shown.

Mr. GODDARD wished to know, in the event of obtaining sufficient funds, when the debentures would be paid off?

Mr. VIAN said, although no dividend could be declared until the debentures were fully paid, whatever success they met with they could not discharge them until twelve months, in accordance with the first resolution, in order that the subscribers might obtain the 15 per cent.

Mr. HEATH, in proposing a vote of thanks to the chairman and directors, congratulated the shareholders upon the favourable prospects of the company, and observed that Capt. Bennet's heavy rains had furnished the most ample information.

The CHAIRMAN, in returning thanks, assured the proprietors that they had used their best exertions to advance the interest of the company, and would continue to do so.—The proceedings, which evidently gave great satisfaction to all present, then terminated.

JAMAICA COPPER MINING COMPANY.

A meeting of shareholders was held at the offices of the company, Lime-street, on Tuesday, the 8th inst., for the purpose of receiving a report of the committee of investigation, appointed at the general meeting held on the 7th March last.

Mr. KEMMHEAD in the chair.

The SECRETARY having read the notice convening the meeting, and the minutes of the last, which were confirmed.

The CHAIRMAN said he would not detain them by any lengthened observations, as they had received a report from the committee of investigation, who had requested the directors to call a meeting, which they had immediately done. He would now call upon the secretary to read that report.

The SECRETARY then read the following report:—

Since the last general meeting of the 7th March, when we were appointed a committee of investigation, we have gone most minutely into all the reports and letters from the directors, and have endeavoured to ascertain the state of the mine, and to encourage them to prosecute the explorations of this company any further, as it appears that at Mount Vernon the indications of copper ore have increased instead of decreasing, as it was anticipated. At Bloxburgh, although there appears to be a good quantity of cobalt ore, still, upon having the samples which have been sent over assayed, the percentage of cobalt, even in the best, is so small (2½ per cent.), that it is valueless; indeed, even were it of really good quality, it is always difficult of sale. Under these circumstances, we cannot advise you to prosecute matters any further; but as there will be sufficient funds, in all probability, to meet the liabilities, we would recommend that the directors should use every exertion to get in all arrears of calls, and to look out for purchasers of the plant, machinery, mules, &c., and the sooner this can be brought about the better for all parties. For the purpose, therefore, of getting the sanction of the great body of shareholders, we would advise the directors to call an extraordinary general meeting as soon as convenient, that this report may be submitted for their consideration.

The CHAIRMAN said that, agreeably with the request of the committee, the directors had called this meeting, and had frequently met them, at the same time, they (the directors) abstained from interfering in any way, and the report just read was entirely the report of the committee of investigation, and not the directors. Full instructions had been given to the secretary to afford the committee every facility, and to place all the books and documents at their disposal. He (the chairman) agreed with the report, and considered it was desirable to bring the concern to a close, because, without giving an opinion whether copper was to be found at Mount Vernon, or the other mineral at Bloxburgh, the company, from a deficiency of funds, were not in a position to test it. He must say that very little encouragement had been given to the directors to proceed, for not only had the shareholders not responded to the call, but some of them—those who had not taken the trouble to call at the office, and who had been associated with the facts—had used very strong language out of doors in reference to the directors, in consequence of the disappointment which had been felt at the absence of success. He threw back such insinuations with contempt; the directors had done the utmost in their power for the benefit of all—they had made no charge for their own time and trouble, and exercised the most rigid economy, both here and the other side of the Atlantic. It was hard that the directors should be twitted, when they had lost their own money, and frequently made advances, rather than press upon the shareholders for calls. He (the chairman), as an original proprietor, had never sold a single share, but, after wards rose to a premium, although that did not arise from any statement made by the directors, and they were not responsible for the advance; indeed, they had arranged with other companies, by which the original holders could, if they had sold out, have re-imbursed themselves. He was desirous that the concern should be closed without further loss or risk; and if he had had the least idea of the trouble of such a concern, he would not have undertaken it upon any account, however successful it might have terminated. They had met almost daily; and he could not help feeling that gentlemen

had no right to make out of doors such statements as he had heard, without coming to the office to investigate the affairs. He was not prepared to take any further responsibility unsupported by the shareholders, and, therefore, fully concurred in the proposition made by the committee, to wind-up the concern, and be spared from any further annoyance.

Mr. STREET said that up to the present time he was of the same opinion as the chairman, that it would be preferable to wind-up their affairs; but this morning he had received a letter from Capt. Hoskins, who was formerly an agent of the Santiago Mines in Cuba, and well acquainted with mining in Jamaica. Mr. Street then read the following letter from Capt. Hoskins:—

Sithney Wheel Butler, May 5.—The stratum of ground in Jamaica, and more particularly at Mount Vernon Mine, contains very similar mineral indications as some of the productive mines in Cuba. In the Santiago Mines, now in course of working, the lode yielded black and grey oxide of copper ore, about 25 fms. from the surface, but not in sufficient quantity to pay. Between that depth and 35 fms. below, it changed to yellow copper, sulphur, and arsenical pyrites, which yielded from 5 to 10 per cent., with settled indications. The Cobre Mines, in Cuba, are an exception; but productive courses of ore are generally found from 35 to 40 fms. from surface, yielding from 14 to 15 per cent. of copper. I have frequently met with disturbed strata at about 20 fms. from surface, which occurs in nearly all the mines in Cuba, and in many instances is a conglomerate, and destroys the mineral vein when it comes in contact. But this can be got rid of only by developing below, or excavating east or west, as the case may be. The surface indications at Mount Vernon are highly mineralised throughout, and for a great distance about the lode, which, in depth, I have no doubt, will form a junction, and make productive returns. It appears to me that if you were to develop a winze (say to 10 or 15 fms in depth at the point of intersection of Nos. 2 and 3 lodes), a deposit of copper ore is very likely to be found, and productive. This could be carried out by extending a chain from the crank of the wheel, over a pulley, to draw the water, thereby proving the two lodes at the same expense, instead of sinking the present shaft, which is situated too far to the east. Being pressed for the post, I have not time to-day, but I think I can put you in a way to make your cobalt ore saleable.—W. HOSKINS.

He (Mr. Street), although not prepared to submit a motion, was disposed to recommend a further trial, well knowing the high character and ability of Capt. Hoskins. Mr. HOSKINS thought it was an unfortunate time to wind-up, when copper ore obtained from mines in the vicinity had been sold in New York, varying from 2 to 29 per cent., and one parcel had recently been received in this country yielding 34 per cent. It had been stated that on the Sue River property there were no stones of ore larger than a walnut, although several specimens larger than cocoanuts were now deposited in the Paris Exhibition.

The CHAIRMAN said, without giving any opinion as to the ultimate results, the question was the ways and means to carry it out; for if there were not a definite understanding upon that point he would not go on.

After a lengthened discussion as to the present liabilities, during which it was stated that they amounted to about 1000l., the following resolution, proposed by Mr. Cater, and seconded by Mr. Hitchins, was unanimously agreed to:—"A letter from Mr. Hoskins having been read by Mr. Street, and information as to the sale of copper ore from Jamaica having been given to the meeting by Mr. Hitchins, it is resolved that, in the opinion of this meeting, it is desirable that the operations at the mines should be continued, with a view of testing them, so far as a 2s. 6d. call upon the new shares will, after paying existing liabilities, suffice for that purpose; and that the opinion of the shareholders generally be taken upon the proposition, by circular addressed to them individually; and the undersigned shareholders agree to pay such call of 2s. 6d., provided the shareholders holding a majority of the new shares assent to this resolution." The whole of the parties present, including several of the committee of investigation, signed the resolution, and the proceedings terminated with a vote of thanks to the chairman.

Mining Correspondence.

BRITISH MINES.

ALFRED CONSOLS.—The lode at Field's engine-shaft, sinking below the 130 fm. level, has improved since the last report, it being now worth for copper ore 20l. per fm.; the lode in the 130, east of this shaft, has a better appearance, worth for copper ore 50l. per fm. The lode in No. 2 winze, sinking below the 120, is worth for copper ore 40l. per fm.; the lode in the 120, east of this shaft, is just as good, worth for copper ore 10l. per fm. The lode in the 80, east of the lode, has a better appearance than when last reported, and will yield about one-third of a ton of ore per fm. All the other parts of mine are just as for some time past.—M. WHITE.

ARUNDELL COPPER.—The Victoria engine-shaft is sunk 3 fms. 2 ft. below the 36; the ground this week is not so good for sinking, owing to some branches of peach and mangle underlying towards the lode. In the 36, driving east on the new lode, this end is now more promising than it has been for some time, containing light caple, mangle and yellow copper ore. In the 36 cross-cut, driving north in the great lode, we have cut in the lode about 8 feet; the lode contains the same quality ore as reported last week. In the 36 cross-cut, driving north in the great lode, we have driven 5 fathoms 5 feet in the leader part of the lode, but have reached no north vein as yet; the lode is much of the same character. In the 23, driving west, the lode has been very unsettled for the last 6 feet, and I cannot say what it contains before we get north in the lode, which we shall do in the course of a few days.—WILLIAM THOMAS: May 9.

BEAUFORT CONSOLS (SOUTH WALKS).—The stopes are looking remarkably well, and will turn out 3 cwt. per fathom of good quality silver-lead. In examining the strata by the side of the lode I find there are several little branches of lead making into the lode; and where these branches form a junction with the lode there is no doubt but we shall have a good course of lead. At the shaft we are down about 12 ft.; the lode here is about 6 feet wide, and looks very favourable, with a good deal of lead throughout. When we get a little deeper there is no doubt we shall have a very great quantity, but having at present only a small force, we cannot go down very fast.—R. R. HANLEY: May 10.

BEDFORD CONSOLS.—The adit level is driving at 3½ 7s. per fathom, stent 5 fms. or the month out; the lode is 4 ft. wide, composed chiefly of spar, spotted with mangle and ore. We have also set a pitch in this level to two men, at 13s. 4d. in 1l. In eastward we have discovered the lode about 25 fms. east of the old workings, and find it about 6 ft. wide, containing good gossan and spar, highly stained with copper, a very fine-looking lode.—T. HANLEY; H. HOSKINS: May 10.

BEDFORD UNITED.—The engine-shaft is 8 fms. 3 feet below the 130 fm. level; there is no change in the ground to notice. We have about 6 ft. more to drive north in the 130 fm. level, east of engine-shaft, to intersect the lode east of the slide. No lode taken down in this level, but the 115 fathom level, east of the lode, is worth 40l. per fm. In this level west the lode is 2 ft. wide, producing good stones of ore; the stopes in the back of this level are still looking well. In the 103 fathom level east the lode is 3 ft. wide, saving work. Jackson's stopes in this level are worth 6 tons of ore per fm. The lode in the 90 fm. level is 3 ft. wide, producing good stones of ore, a very promising lode. We are still driving by the side of the lode, in the 80 fm. level east. In the 35 fathom level east the lode is 2 ft. wide, producing fine stones of ore, and still looking very promising.—J. PHILLIPS: May 9.

BOLENOVE.—In the 20 fm. level west the lode continues 2 feet wide, producing stones of ore.—W. ROBERTS: May 5.

BORINGDON CONSOLS.—The ground at Annie's shaft is more favourable for sinking. In the 24 east and the lode is about 7 feet wide, one part of it being good saving work, and judging from the appearance of the lode in the present end, we shall certainly have a good run of ore. The stopes in the back of the above level are turning out good work, and from which we shall be able to stop it to a better advantage in the course of next week. The stopes on the south part of the lode are not quite so productive going west, but very warm for the men working. In cross-cutting west of Annie's shaft, in the same level, to see the north part of the lode, we have intersected several small branches of lead, which are more free from mangle. In driving the 12 fm. level east we have intersected two cross-courses, which have not heaved the lode any distance to notice; the lode in this end has a promising appearance. Bennet's winze is sunk below the 12 fm. level 5 fms., which is turning out some saving work.—W. GODDEN: May 10.

BOTTLE HILL.—The ground in the cross-cut in the 123 fm. level is much the same as last reported on. In the 112 fm. level the lode is beginning to take its regular course, to the east of the cross-course, and presents a very kindly appearance, but not rich. The stopes in the back of this level are yielding profitable work. The south lode in the 100 fm. level is much the same as last reported. No alteration in any other part of the mine to notice.—J. GIBBARD: May 9.

BRYNFORD HALL.—The 50 fm. level, on Milwr vein, again assumes a promising character, and is now driven 8 fms. west of the oblique north and south vein. The rise on the Milwr vein, about 4½ fms., by six men, has improved from the level, and will now yield about 1 ton per fm. We continue to drive west on the chert vein with favourable indications, are now quickly passing through the measures usually lying under the bearing chert, and have reason to place faith in this desirable trial. We are summing going under the bottom level at Matthews's in whole ground, and some pitches in the old workings.—W. FRANCIS: May 9.

BRYNTAIL.—We are getting on very well with sinking the new shaft, it is now 2½ fms. deep, and completely timbered. Yesterday we found a very good stone of ore in the blue-clay we are now passing through; it looks like a tumbler from the back of the lode. The 10 fm. level east is much the same in appearance as when I wrote to you last, although it has produced a few fine stones of ore lately.—J. ROACH: May 9.

BRYN-Y-FEDWEN.—The lode in the 20, going west on the south lode, is 2 feet wide, composed of spar, blende, and clay-slate, with a little lead ore, and is of a more promising appearance than it has been for the last 8 or 10 fms. driving. We have suspended the driving of this level for the present, and have put the men to cut the new road to the dressing-floors. The lode in the winze sinking below this level is 4 ft. wide, but unproductive at present; it has passed through the ore ground which dipped east, and is gone through it in going down; this winze is now down about 11 fms. below the 20, and has been in a good lode nearly all the way, until within the last few feet in sinking. The lode in the deep adit level, on the south lode, is 3 feet wide, producing a little ore, and is of a more promising appearance than of late; this level is also suspended for the present, and the men are put to rise against the winze sinking below the 20, where we have about 9 fms. to sink and rise to communicate to each other, which, from all appearance, when completed will lay open a large piece of ore ground, which can be taken away to good advantage; this rise is set to six men, at 6s. per fathom. We have a great quantity of ore ground now laid open on the different lodes throughout the mine, and we are commencing to make the dressing-floors with all possible speed, in order to make returns. All these things will be laid out in the most economical manner possible.—May 7.

BUTTERDON.—The engine-shaft is sunk 10 fms. 4 ft. 6 in. below the 30 fm. level, where the eastern part of the lode is 6 in. wide, composed of can, with spots of lead; it now underlies west, and that quicker than the western part of the lode, at this time 3 fathoms up from the bottom of the shaft, at which point it is from 10 in. to 1 ft. wide, composed also of can, spotted with lead. The ground being a light blue till, interspersed with small veins of spar, is favourable for sinking, and, in my opinion, congenial for lead.—T. GARNETT: May 8.

CAE-GYNON.—

mine, to ensure thorough cooperation. Not even a week's uncooperative period, 34 years ago, and frequently since then, but at no time have I seen the mine so productive as at present. The mine is fairly worked on cutwork, which, I think, is the

wide, worth 20¢ per ton. There is every reason to expect a good productive lode in this level, all the distance between this place and the lead lode. In the western end, on the flap-jack lode; at this same level the lode is at present small. In the eastern end the lode is 2 ft. wide, producing stones of ore of good quality, with ground more

stimulate ourselves on this vast improvement. — J. WOLFEKSTAN; May 9.

WHEAL TREFUBIS.—Engine Lode: In the 44 ft. level west the lode is yielding stones of copper ore. There is no alteration in the 34 west since my last report. In the 24 west the lode is unproductive.—Field's Lode: In the 15 east the lode is yielding stones of copper ore.—Gordon Lode: In the 10 west the lode is small, and unproductive.

ductive. In the 10 west, on the south part, the lode yields 2 tons of tinstuff per fm., and is worth 4s. per fathom. Reynolds's shaft is down 3 fms. below the 10 fm. level, and is sinking by eight men. The tin pitches are yielding a fair quantity of tinstuff. The copper ore pitches are looking favourable. —Z. KARAKER: May 8.

WHEAL TRELAUNY.—Smith's engine-shaft is sunk 7 fms. 2 ft. below the 108. The lode in the north end of this level is 2 ft. wide and worth 8s. per fathom. We have cut into the lode at the south end, where it is 2 ft. wide, and worth 4s. per fm. In the 98 fm. level, north end, the lode has not been taken down since last report; in the same level, south end, it is 2 ft. wide, worth 8s. per fathom. In the winze sinking under this level the lode has not been taken down since last report. In the 88, north of Chippendale's shaft, the lode is 1½ ft. wide, worth 4s. per fathom. We have commenced sinking Chippendale's shaft under the 88 fm. level, where the lode is 1½ ft. wide, worth 8s. per fathom. In the 40 fm. level the lode is 1 ft. wide, composed of hornspar, prill, and munda, presenting altogether a kindly appearance. —South Mine: In the 120 fm. level, south end, we are driving in kilias by the side of the lode. In the 107 fm. level south we are stripping down the eastern part of the lode, which is worth 6s. per fm.; in the north end of this level the lode is 2 ft. wide, worth 5s. per fm. We are sinking a winze in kilias in the bottom of this level, south of Trelawny's shaft, to communicate with the 120 fm. level, for ventilation. In a winze sinking below the 82 fm. level, north of Trelawny's shaft, the lode is 20 inches wide, worth 7s. per fathom. The stopes and pitches are producing much the same as usual. —W. BRYANT; W. JERKIN: May 8.

WHEAL TREMAINE.—The Boundary engine-shaft is sunk 6 feet under the 103 fm. level; the lode at bottom of said shaft is 8 in. wide, composed of brint, spar, and munda, with occasional spots of tin and copper, but not to value, the ground being clear of spar, and showing a kindly appearance; in the 103, east of the same shaft, on Allen's branch, the branch is improving and the ground easing, being now worth 12s. per fm.; the stopes in back of the same level is worth 9s. per fm.; the stopes in back of the 93 east of Allen's shaft, on Allen's branch, are worth 9s. per fm.; the stopes in back of the 53, east of the same shaft, on Allen's branch, are worth 8s. per fm. At the new engine-shaft on the south lode, in the 70, west towards Wheal Margaret, there is no change to notice since last report; in the same level, east of Arthur's shaft, on the same lode, the lode is 1 ft. wide, producing stones of tin, with a kindly appearance; the men belonging to this level are now engaged cross-cutting for a communication with the flat-rod shaft and the south part of the lode, the lode being split here as in the upper levels; the stopes in back of the 50, east of flat-rod shaft, on the same lode, are worth 4s. per fm. We are still engaged clearing and securing the 30 and 40 fathom level east of the Old Wheal Providence engine-shaft, on the same lode, where we have discovered some tin ground, and shall commence working on the same next week; the stopes in back of the same level, east of middle shaft, is worth 2s. per fm. In the 30, east of Hoeking's shaft, on the counter lode, the lode is 2 feet wide, unsplit and mixed with kilias, spar, and munda; the stopes in back of the same level is not looking as well as when last reported on. —R. WILLIAMS: May 8.

WHEAL UNITY.—The lode in the 82 fm. level east is 4 feet wide, worth about 6s. per fathom for tin, and producing some good stones of copper ore. In the 70 east the lode is 4 feet wide, worth 5s. per fathom for tin, and occasionally producing stones of copper ore. In the 60 east the lode is also 4 feet wide, of a very kindly appearance, worth 4s. per fathom for tin, with a little copper ore, and opening tribute ground. In the 50 fathom level, east of No. 2 shaft, the lode in the rise is about 3 feet wide, producing stones of copper ore. In the 30 fm. level east we are still driving on the south side of it. We have not taken down any part of the lode since my last report. The ground still continues hard. —JOSEPH VIVIAN: May 7.

WHEAL WHITELEIGH.—The engine-shaft is completed to the 82 fathom level, divisions, casings, &c., fixed. We have this day commenced the cross-cut, and the ground continues hard, the lode in the hope to the lode in six weeks in the 62 fm. level, and the lode in the 62 fm. level, the lode is 2 feet wide, but at present unproductive. The stopes in the back of the 72 fm. level are yielding good quality work. The two parcels of ore last sold are now being shipped off, and we are progressing favourably for the next sampling. —J. PUCKEY; J. GROVE: May 8.

WHEAL WREY CONSOLS.—The cross-cut in the 23 fm. level is extended west towards the lode 3½ fms.; the lode in the 23 fm. level, north of the engine-shaft, is 3 ft. wide, producing ½ ton of lead per fm.; in the same level south it is 3 ft. wide, producing ½ ton of lead per fm. In the 12 fm. level north it is 2½ ft. wide, producing ½ ton of lead per fm., and we expect a great improvement here shortly. The stopes are producing much as usual. We have this day sold a parcel of lead ore (computed 57 tons) to Messrs. Newton, Keates, and Co., at 17s. 11s. per ton. —P. CLYDE, Jun.; W. HANCOCK; R. BOSKILLY: May 9.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET, London, May 11, 1855.

COPPER.		£. s. d.	BRASS (sheets) p. lb.		1 0 0 d.
Sheathing and bolts . . . lb.		0 1 8	Wire		11 3 d.
Bottoms		0 1 8			
Old (exchange)		0 1 0 ½			
Best selected p. ton		129 0 0	Foreign	nom. 22 5 0	—
Tough cake		126 0 0	To arrive	23 0 0	—
Tin		126 0 0			
South American		—	In sheets	28 0 0	29 0 0
IRON.		per Ton.	TIN.		
*Bars, Welsh, in London.	8 0 0	—	English, blocks	111 0 0	—
*Ditto, to arrive	7 10 0	7 15 0	Ditto, Bars (in barrels)	112 0 0	—
*Nail rods	8 0 0	—	Ditto, Refined	114 0 0	—
*+ Stafford, in London	8 10 0	—	Banca	111 0 0	—
*Bars	9 0 0	9 0 0	Straits	nom. 106 0	107 10 0
*Hocks	9 0 0	10 0 0	TIN-PLATES.		
*Sheets, single	8 15 0	10 10 0	IC Charcoal, 1st qua. p. bx. 1	11 0	12 0
Pig, No. 1, in Wales	4 15 0	5 5 0	IX Ditto 1st quality	1 17 0	1 18 0
Refined metal, ditto	—	—	IX Ditto 2d quality	1 8 6	1 9 0
Bars, common, ditto	6 10 0	7 0 0	IX Ditto 3d quality	1 14 6	1 15 0
Ditto, railway, ditto	6 5 0	6 10 0	IX Coke	1 11 0	1 15 0
Ditto, Swedish, in Lond. 15s. 6d.	—	—	IX Ditto	1 11 0	1 15 0
Pig, No. 1, in Clyde	3 2 0	3 3 0	Canada plates p. ton	14 0	15 0
LEAD.			In London; 20s. less at the works.		
English Pig	22 10 0	—			
Ditto short	23 10 0	23 10 0			
Ditto red lead	23 10 0	—			
Ditto white	27 10 0	28 0 0			
Ditto patent shot	25 10 0	—			
Spanish, in bond	21 0 0	22 0 0			
American	none.	—			
FOREIGN STEEL.					
Swedish, in kegs	18 10 0	—			
Ditto, in faggots	22 0 0	—			
English, Spring	22 0 0	24 0 0			
QUICKSILVER.		p. lb.	In Liverpool 10s. per ton less.		
* In Liverpool, 6s. per ton less.	10 10 0	11 0	At the works, 1s. to 1s. 6d. per box less.		
* At the works, 1s. to 1s. 6d. per box less.	—	—	In Liverpool, 6d. per box less.		

REMARKS.—Since this day week, the changes in our market have been trifling. Although there has been but a limited amount of business transacted in metals, their position generally is steady; still, at such critical times as the present, it is very uncertain and difficult to say what turn they are likely to take; consequently, too much dependence must not be placed upon our quotations; however, the prices quoted are those at which business has been done. For further details, we beg reference to our remarks at foot.

COPPER.—The fixed price of this metal, as will be seen in the above list, remains as last quoted, and, judging from present appearances, there is not much prospect of any immediate alteration being made, as a satisfactory business is carried on.

IRON.—English bar in demand at 5s. to 10s. per ton under present prices, but few contracts have been passed. Rails are enquired for, but business has not been done to any extent. For Staffordshire iron, the market is dull, without any alteration to notice in prices. Scotch pigs have not been active at any time during the week; holders, however, have been enabled to realise little better prices, a gradual improvement having taken place. Buyers on 'Change to-day at 61s. 9d.; sellers, 62s., mixed numbers, g.m.b. f.o.b. in Glasgow.

LEAD.—English and foreign are in rather less demand.

SPELTER.—Some parcels have changed hands at 22s. 5s., and 22s. 7s. 6d. The market keeps very inactive, and business could still be done at the former price.

TIN.—Both English and foreign are quiet.

TIN-PLATES.—A parcel of 3000 boxes IC coke are offering in our market at 24s. per box, but, as they are supposed to be damaged slightly, the price is no criterion of the value of good plates. There is also another parcel of about 800 boxes, same brand. The demand for coke and charcoal plates at the moment is but moderate.

STEEL.—A parcel of 302 kegs of Swedish steel has been sold: 100 kegs only bow remain in our market, for which 18s. 10s. is asked.

QUICKSILVER.—As last quoted.

GLASGOW, MAY 10.—During this week our pig-iron market has remained remarkably steady, the fluctuations not exceeding 6d. per ton. Latterly a moderate business has been done at 61s. 3d. and 61s. 6d., prompt cash; and also at 61s. 6d. and 61s. 9d., fixed rates. The shipments are again considerably larger than expected, but the number of tons shipped foreign is in excess of that shipped coastwise by about 1100 tons. To-day our market was very firm, but with hardly any business to report. The closing prices are—Buyers, 61s. 3d. to 61s. 6d.; sellers, 61s. 9d. to 62s. No. 1, Gartsherrie, 67s.; No. 1, g.m.b., 62s. 6d.; No. 3, g.m.b., 61s. 3d. Shipments for the week ending May 6:—Foreign, 7598 tons; coastwise, 6620 tons = 14,118 tons. In the corresponding week of 1854 they were—Foreign, 3663 tons; coastwise, 11,667 tons = 15,330 tons.

LIVERPOOL, MAY 10.—Orders for manufactured iron of all kinds continue light, and prices are steady; the tone of the market is rather firmer than last week. In the coal market, however, the tone is not so good, the dealers acting with great caution at present. Mixed numbers, warrants, may be quoted to-day 61s., rather buyers. The quotations are—Merchandise, 61s. 3d.; Tin-Plates, Charcoal, IC, Liverpool, 11s. 12s. per box; Coke,

PARIS, MAY 10.—The great demand for iron, noticed in our last Journal, continues unabated, and, in consequence of the upward tendency which the market exhibits, sellers are indifferent, and in some instances refuse to operate at present prices. Within the last few weeks, the quotation for Scotch pigs, Gartsherrie No. 1 (the favourite brand of the French ironmasters), has improved fully 10 per cent., and a further advance is anticipated. Holders are very firm; indeed, it may be said that there are no sellers of that brand. At St. Didier, great activity prevails, and former rates are easily maintained. The Anzin Mining Company have resolved that, from this date, the prices of their coal shall be increased 10 centimes per hectolitre. The *Journal des Chemins de Fer* states that the line which is to connect the Portes and Senecbas Collieries with the Mediterranean Railway has been referred to a commission of enquiry, which enquiry will terminate on the 15th inst. The Lead and Zinc Mining and Smelting Company (*société anonyme*), of Stolberg and Westphalia, have convened their ordinary annual meeting for the 30th instant, at Aix-la-Chapelle. The Vieille Montagne Zinc Mining and Smelting Company have declared a dividend for 1854 at the rate of 20 fr. per tenth of share, which will be payable from this day. The Charbonnages du Nord de Charleroi have convened their annual general meeting at Brussels for the 29th inst. With regard to the Belgian markets, we extract the following from the *Journal de Commerce*:—At the meeting of ironmasters held at Namur, on the 3d inst., general complaint was made of the few new orders which were being received, although during the last few days there appeared a little more animation, and the forces were still engaged with orders on hand. The prices are unchanged, and buyers give former prices without hesitation. Business, at Liège, continues to be transacted at the same rates for iron, and there is a moderate demand, but for coal the demand is beginning to slacken.

MINES.—In addition to a larger amount of business transacted, there has been more excitement in the market this week, consequent upon one or two good discoveries of ore having been made, and more than one mine having materially improved in general prospects. In mines where no change has taken place, prices remain about the same, though the tendency is rather downwards. East Bassets have been in great request, and the price has advanced from 30s. to 42s. 10s., 45s. This, however, is owing solely to the demand for shares, as neither of the lodes have yet been cut, although, as we stated a fortnight ago, the cross-cut driving to intersect the first of them is very near the point where it was expected to be met with. From North Wheal Robert, notice was received on Monday of a new and very important lode having been cut in the 30 fathom level, and shares, which had previously been very flat at 12s. to 14s., became in great demand, continued so all the week, and have left off at 25s. to 30s.; the discovery is in the old part of the mine, where, in cross-cutting in the 30 fathom level, the lode was met with 2 feet wide, nearly solid ore, and worth 50s. per fathom; this lode, it would appear, formed a junction with another lode at 42 fms. deep (not having been seen above), and in the back of this level is now yielding 5 tons per fm.; the ore dips east, and the 52 and 62 fathom levels are both in course of driving towards it, the former being about 12 fms. off; as the two lodes go down together, large quantities of ore may be looked for when these levels are under the ground so rich in the 42 and 30; at the trial shaft, near Sortridge, the prospects are also improved. Herodfoot has so much improved in the bottom levels, that the manager hopes now to meet the cost of working, and as the price of lead is advancing probably more may be done. North Towy has sold 20 tons of lead for 32s., and will now have regular samplings. Sortridge Consols shares have been flat during the week, without any falling off in the mine. Alfred Consols and Buller are both looking better. At the South Frances meeting, the dividend declared was 12s. per 256th, and we understand the next two-monthly dividend will be 15s.; shares have advanced to 400s., being a rise of nearly 200s. per share since we first called attention to the mine. A fine course of ore has been cut in Wheal Maid (St. Day United), and a good tin lode in Pedn-an-drea. At Bedford United, driving east in the 35 fm. level, a very rich gossan has been cut into, similar to that met with over the rich course of ore in the present workings, and which may lead to another shoot of ore.

In Wheal Pollards there has been a large business done at 10s. to 12s. 6d.; Gonamena advanced to 18s., 20s., but no sellers; Crebors, owing to an improvement, have been done at 14s. 5s.; North Crofty, 10s. 10s. to 11s.; West Frances, 17s. to 19s.; South Tamar, 6s.; North Buller, 3s. 10s.; Bedford United, 10s.; East Tamar, 5s.; North Bassets have been in great request, at 21s. to 22s.; West Basset, 28s. 10s. to 29s. 10s.; Sortridge Consols, 12s. 12s. 6d. to 21s. 17s. 6d.; Buller, 47s. to 49s.; Bassett, 57s. to 57s. 12s. 6d.; Alfred Consols, 10s. to 10s. 10s.; St. Day United, 17s. 6d. to 21s.; Great Devon Consols, 36s. to 36s. 12s.; Cljiah and Wentworth, 13s. 10s. to 14s. 10s., and very little doing in them, although if the lode were cut rich in East Bassett it would materially enhance the value of Cljiah, the adjoining mine; Vale of Towry, 17s. 6d. to 12s.; Wheal Wrey, 5s. 2s. 6d. to 5s. 7s. 6d.; West Seton, 19s. to 20s.; North Robert, 25s. to 30s., in great demand; Herodfoot, 2s. 10s. to 3s.; Trebarvah, 2s. 2s. 6d.

The price of lead ore is getting up, and if the enormous demand for lead which exists just now should continue, and there is every probability that it will, we may look for a further and very considerable rise in ores. We have long felt and expressed that, looking at the price of lead, the miners have been receiving inadequate prices for some months. The stock of lead in the smelters' hands must be getting low. The sales of ores are not so large as formerly, and there may be difficulty in meeting the demand, for although the home consumption for building operations is still small, the Government have been, and are yet, contracting for many thousand tons, large quantities being required for the Minié rifle balls, and it has now been found necessary to case with lead the balls for the Lancaster guns. We understand the French Government have been contracting for 16,000 tons of pig-lead, and require nearly as much more. Orders, also, on a large scale have arrived this week from America. We hope these things will give a new stimulus to lead mines, which have been so long depressed. At the Holywell sale, yesterday, Orsedd sold 20 tons, at 13s. 18s. 6d. per ton, being an advance of 1s. 18s.; Merilyn, 10 tons, at 12s. 17s. 6d.; and Garreg, 6 tons, at 13s. 9s. 6d.

At the Devon Great Consols eleventh annual meeting, on Wednesday, the accounts showed—Balance from last account, 15,210s. 4s. 2d.; carriage of ores, 1032s. 12s. 10d.; sales of copper ores, 151,467s. 18s. 7d.; fees on transfers, 9s. 12s.; interest on Exchequer bills, 103s. 15s. 3d.; interest on money lent, 105s. 14s. 7d.; income tax on ores, 656s. 0s. 2d.; By—mine cost, 64,861s. 19s. 11d.; lord's dues, 11,683s. 13s.; timber, 6196s. 7s. 5d.; iron, 2630s. 19s. 1d.; water rent, 3976s. 12s. 6d.; By—sales, 1691s. 3s. 1d.; taxes, 1691s. 3s. 1d.; income tax, 2194s. 6s. 8d.; education of mine's children, 100s.; resident director's compensation, 600s.; London expenses, 716s. 15s.; directors and auditors, 422s.; dividends, 38,368s.; leaving balance, 13,955s. 14s. 11d. The balance of assets over liabilities amounted to 109,054s. 4s. 6d. Capt. James Richards reported that the quantity of ore in reserve was estimated at 72,700 tons. A full report will be found in another column. The directors' report is highly satisfactory, and the balance in hand has increased from 15,210s. to 18,966s.

At South Wheal Frances meeting, on Monday, the accounts showed—Balance to end of January, 578s.; ores sold, February 1, 2701s. 12s. 11d.; March 8, 3407s. 17s. 2d.; tin sold, April 21, 218s. 11s. 4d.; sale of materials, 16s. 9s. 3d. = 6344s. 10s. 8d.—Mine cost, Feb. 774s. 18s. 3d.; March, 1244s. 3s. 6d.; merchants' bills, 699s. 7s. 7d.; dues, 421s. 17s. 6d.; leaving a profit of 3204s. 10s. 10d. A dividend of 3976s. 12s. 6d. per share, was declared, leaving in hand to next account, 867s. 3s. 10d. The mine was informed, is in a highly prosperous state: the quantity of ore discovered is much greater than that being extracted. The levels are in an excellent state, and it is believed that there is more than 100,000s. worth of ore discovered.

The Eyan Mining Company, at their meeting, on Thursday, sold 79 tons of lead ore, which realised about 1100s. The committee afterwards declared a dividend of 630s. (10s. per share).

At Great Folgoth Mining Company meeting, on Monday (Mr. P. D. Hadow in the chair), the chairman announced the severe loss the shareholders had sustained by the sudden death of Mr. Merdell, one of the most active members of the committee of management, and whose services had been invaluable in placing them in their present satisfactory condition. The secretary read the notice convening the meeting, which was for the purpose of forfeiting all shares in arrears of call. In answer to a question by a shareholder, it was stated that there were only 246 shares in arrears. After some discussion, a shareholder paid his call upon 100 shares, thus reducing the number of defaulters to 146. A resolution, in accordance with the 16th rule of the coat-book, was then unanimously passed, forfeiting the 146 shares; but it was intimated that, if the arrears of call was paid by the end of the week (this day), the committee would, at the next general meeting, request the restoration of those shares. The chairman said, that according to the last accounts received, the mine was continuing to give satisfactory returns. The proceedings then terminated with a vote of thanks to the chairman and committee.

At Orsedd Mine meeting, on the 4th inst. (Mr. J. Y. Watson, F.G.S., in the chair), the accounts showed—Balance from last account, 143s. 13s. 4d.; calls received, 119s. 15s.; ore sold, 758s. 15s. 6d.; 1017s. 3s. 10d.—Mine cost, December to March, 986s. 2s. 10d.; leaving balance in favour of adventurers, 311s. 1s. The estimated balance of liabilities over assets was 312s. 4s. 3d. Mr. W. Kamsden reported that in the 40, at the engine-shaft, a winze east of the lode was rather close, and the ground hard, but producing good stones of lead ore. At the new north lode, the pitch in the level had improved considerably during the last ten days, and had been producing 2 tons of lead ore per fm. At Rose Hill shaft, they have commenced sinking a winze below the 40, on the main lode; they are now 5 fms. deep; the lode presents a very promising appearance, 2½ feet wide, composed of carbonate of lime and clay-slate, producing occasionally good stones of lead ore.

At Tincroft Mine meeting, on Thursday (Mr. P. D. Hadow in the chair), the accounts showed a loss in working the mine for the last 12 months of 7786s. 4s. 4d., against which 1967s. 10s. had been received on account of the fifth call. The balance-sheet showed—Balance last account, 1973s. 8s. 10d.; mine cost, twelve months, 33,222s. 5s. 4d.; interest and discount, 189s. 5s. 3d.; sundries, 189s. 9s. 2d. = 35,533s. 5s. 2d.—By sale of tin and copper, 26,173s. 13s.; sale of engine, 382s.; leaving balance against adventurers, 8959s. 12s. 2d. The principal question discussed was the appointment of an experienced and confidential underground agent; the chairman stated that Mr. Pryor, a practical miner, and who held one-sixth of the mine, had offered most liberally to undertake the superintendence. Mr. Hodgson, as usual, opposed, but eventually the appointment was left to the directors.

Wheal Crebor Mining Company made a call of 2s. 6d. per share.

At the Barytes Company of Ireland adjourned quarterly meeting, held at Walbrook House, on Thursday (Mr. James Routh in the chair), the secretary having read the minutes of the previous meeting, which were confirmed, the report of the committee, of which the following is an abstract, was submitted.—With respect to the mine, it appears that two shafts have been sunk on the course of the lode to a depth of 10 fms. each, and in both cases the lode has so much improved in size that in the lower workings it is now upwards of 13 ft. broad, and produces about 23 tons per fathom. From this portion of the mine upwards of 2500 tons of ore have been raised. With regard to the old workings, it has been considered advisable to lay them open more extensively, by the sinking of a winze-shaft, to cut the lode in the 20, and on its completion a large extent of valuable ore ground will be laid open. Sales to a large extent have already been made, and from the superior quality of the ore, no doubt exists of the success of the undertaking. It would appear that considerable difficulty has been experienced with respect to the regular percentage of the ore from the mine to the port of shipment, from the dependence of the company on the very limited resources of the neighbourhood: to obviate that difficulty, it is proposed to purchase carts and horses, by which means regularly in its conveyance will be secured, and a considerable saving in expense will be effected. The result of the workings of the mine for the past nine months shows a balance in its favour of 458s. 12s. The report and accounts having been received and adopted, the meeting terminated with a vote of thanks to the chairman.

At the Rittion Castle Mine quarterly general meeting, on the 30th April (Mr. W. Aldridge in the chair), the accounts showed a balance against the mine of 411s. 3s. A call of 1s. 6d. per share was made, and the following gentlemen appointed the committee of management:—Messrs. W. H. Aldridge, W. H. Brock, J. C. Dalton, A. Richards, and S. Wetherley. A detailed report from Capt. John Griffiths was read to the meeting, and resolutions were passed to prosecute the mine with vigour.

At Wheal Zion meeting, on Wednesday, the accounts showed—Balance in hand last account, 73s. 19s. 9d.; calls, 665s. 8s.; ore sold, 121s. 12s. 4d.—Labour cost, Dec., 235s. 16s. 8d.; Jan., 243s. 5s. 4d.; Feb., 275s. 8s. 1d.; discount, 7s. 8d.; London expenses, 60s. 18s.; travelling, 6s. 6s.; leaving in hand, 39s. 0s. 7d. A call of 5s. per share was made. From explanations elicited during a long conversation, it appeared the mine was in a progressively improving state, and that there was every prospect of successful results. A full account will be found in another column.

Laxey, Newtonards, Foxdale, Welsh Potosi, Cwmystwith, East Logyvan, East Darren, Cubert United, Wheal Wrey Consols, Maeserwiddie, Coetia Lly, Deep Level, Talsare, Holywell Level, Orsedd, Merilyn, Garreg, Bwlygh Gwyn, Gurtynedd, Shallee, Rhiwarth, Bryntall, Gorn, North Towy, Vale of Towry, Hope Valley, Round Hill, and Trethewa, have sold lead ore.

Porkellis United, St. Austell Consols, Great Wheal Vor, Yeoland Consols, have sold black tin.

Great Wheal Vor Mines produced black tin to the value of 1060s. 6s. 2d. in three weeks' working.

At Sortridge and Bedford, Captain T. Treweke reports that during the quarter the engine-shaft has been sunk 8 fms. below the 30 fm. level, and expects shortly to cut the lode. In the 20 fm. level there is good tin ground, producing 3½ cwt. per fm.; the backs laid open are expected to give a balance of profit of 630s. 10s. The trial shaft is down 2 fms. 3¼ ft.—a fine looking copper lode, 6 ft. wide, with good stones of ore. By the Tavy a lode has been cut between 3 and 4 ft. wide, black and yellow ore. The engine and machinery were working well.

A report from the committee of management of the Ivybridge Mine will be found in another column, showing the steady progress of that valuable undertaking. The Cwmildyde Rock Company have received information that reports have been spread amongst the work-people, with a view of inducing them to desert the mines, upon the ground that the directors intended to sell the mine to the Board of Management in London. It is to be regretted that some injury has arisen in consequence of the information that the directors are adopting energetic measures to discover and prosecute the author. We need scarcely add that the greatest harmony exists both among the committee of management and the shareholders.

The Welsh Potosi Mining Company have received a favourable report from Mr. Wilkinson, the manager. He states—"I am proud to say the mine never looked so valuable; we have made No. 1 stoppe double the length, or at least 15 fms. Added to this, we have cut a branch of ore turning south at the east end, and rounding behind the present stoppe; this is 4 feet wide, and as near solid as possible. At No. 1, in the 10, we have driven and opened ground which looks beautiful; the ore is coming more like No. 1 as we go west, and will give us good returns. We are making progress with the new floors, and the wheel is up."

Mr. Harris's letter, on the Great Cambrian Mines, in another column, gives some very favourable results as to the gold produced by his various assays. Antimony has been found in the neighbourhood of Dolgelly.

During the week, shares have changed hands in the following:—**DIVIDEND MINES.**—Alfred Consols, Bedford United, Comford, Devon Great Consols, Dharu, East Pool, Gonamena, Herodfoot, Hington Down Consols, Mendis Hill, Merilyn, Nanctoes and Penrhyn, North Pool, North Wheal Bassett, Par Consols, Rosewarne United Consols, South Tamar, South Wheal Frances, St. Aubyn, Glynns, Stray Park, Tincroft, Trethewa, West Bassett, West Wheal Vor, Great Wheal Providence, West Damsel, West Wheal Seton, Wheal Arthur, Wheal Bassett, Wheal Buller, Wheal Charlotte, Wheal Clifford, Wheal Exmouth and Adams United, Wheal Golden, Wheal Jane, Mining Company of Ireland.

MINES WHICH HAVE SOLD ORE.—Boscan, Cas-Gynon, Callington, Carnyorth, Carnvanall, Cljiah and Wentworth, Craddock Moor, Cwm Darren, Devon and Courtney, Dyffryn, Eaglebrook, East Bassett, East Tamar, East Wheal Vor, East Wheal Vor, Garreg, Gilman, Granbler and St. Aubyn, Great Onslow Consols, Great Shale Consols, Great Wheal Alfred, Great Wheal Baddern, Great Wheal Vor, Great Wheal Gurne, Halamanning and Croft Gorthal, Herward United, Leeds Towry, Molland, North Buller, North Frances, North Wheal Crofty, North Wheal Robert, Orsedd, Pedn-an-drea, Porkellis United, Rheidol, Sortridge Consols, South Carn Brea, Wheal Capid, Wheal Franco, Wheal Grenville, Wheal Harriett, Wheal Kitty (Uny Lelant), Wheal Tebily, Wheal Uny, Wheal Zion, Yeoland Consols, Barytes Company of Ireland.

MINES WHICH HAVE NOT SOLD ORE.—Buller and Bassett United, East Caraden, East Wheal Robert, Nant-ar-Nelle, Retallack United, Severn, South Buller and West Penstruthal, Tamar Maria, Wheal Ludoct, Wheal Pollard, Clew Bay.

In Foreign Mines, the market closed flat; United Mexicans changed hands at 6½, and National Brazilian 2½, being the only two companies of this description in which

wide, worth 2 cwt. of ore per fathom. In the end driving north from bottom of the Schindler mine, we have not the whole of the level, but the part from the Schindler level (No. 2), in the Truders level, at 185 feet south of Schindler level, No. 1. Pitch No. 11 south, on Schindler level, has been set for this month; I expect to raise some good ore from it. In the old adit we yesterday cut what appears to have been a winze from some upper level; it is full of timber, and seems to run up very high; we shall be able to say more about it in a few days. During the month of April, 312 cwt. of ore were dressed and a lot to the smelting works, making a total of 700 cwt. (35 tons) for the present campaign.

The Lusitanian Mining Company have advices from Capt. T. Chegwin, their mining agent at the Pallas Mines, Portugal, dated April 27th, of which the following are extracts:—

PALLAS.—The level at Taylor's engine-shaft, sinking below the 8 ft. level, is 3 ft. wide, worth 1 ton of ore per fath. The level in the 8 ft. level, west of Roy's winze, is still split into strings, and letting out several small streams of water; the level is composed of elvan and strings of mauls. The slopes No. 1 will be resumed next week. The level in the slopes No. 2, east of Roy's winze, in the back of the 8 ft. level, is 1 ft. wide, worth 1½ ton per fath. The level in the slopes in the back of the adit, west of Taylor's engine-shaft, is 2 ft. wide, worth ¾ ton per fathom. The level in the winze, sinking below the middle level, west of Antonio's winze on the mill level, is 4 in. wide, producing good stones of copper ore.

SURFACE WORK.—We have sunk some coean pits on the course of a north and south lode to the west of our present workings, which is about 1 foot wide, composed of a blackish elvan and priss. We have a cutting about 120 fms. west of Taylor's engine-shaft for 40 fms. in length, and from 4 to 5 feet deep, where our east and west lodes show very plain. There are two lodes about 20 fms. apart, each about 3 ft. wide, composed of elvan, priss, and a little gossan. The course of these lodes appears to be regular according to the traversing. We think of opening on one lode more in the western hill; then we shall turn our attention to the eastern hill. In the eastern hill there is an old mine, said to be a lead one, which is full of water and stuff, and now the season has become drier, we think we can get it cleared out; it is not likely to cost more than 4l. or 5l. Some say it is good, and others say it is good for nothing; therefore, we must clear it to know. We have begun to send away our copper ore to Salvo, which will be forwarded (from there) to Aveiro by barge. We shall get it carried away as fast as we can get carts to do it; there is no possibility of calculating at what rate, because sometimes we can get carts, and at others cannot, but will get it off as fast as possible. [The *Susan Ann*, with about 100 tons of copper ore from the above mines, has lately arrived at Swansea.]

The Iberian Mining Company have received their report for April:—

No. 1 LEAD MINES.—We have finished the whole of the tramway in the deep adit and the winze underground. We should have been forking the water in the main shaft, but I have thought it best first to get out the arches in the back of the adit, and clear away a lot of stuff in the old stopes, which we find to be very leady, and worth taking out. In the San Benito level we have cut the lode, which we are driving on both ways; there is a branch of ore in both ends, and for killas ground is not looking bad; the lode never makes well here in the sandstone. The ground is fair for driving, and the men are making wages at 6s the vara (2½ lbs. 6d. per fathom). We are getting on with the dressing-floors.

No. 3 LEAD MINES.—The adit is in 231 feet, the tramway is now carried close in, and we are getting out the broken stuff much cheaper than formerly.

The Peninsular Mining Company have received their report for April:—

No. 1 COPPER MINES.—The eastern part of the mine is looking better than when I last reported. The intermediate shallow level is in a very good lode; the ground is rather tight. Juan's stopes, in the back, is set to six men, at 6s the vara (4½ lbs. 9d. per fathom). Aldeco's stopes is set to four men, at 6s the vara (3½ lbs. 8d. per fath.); the lode is wide, with pretty fair quality ore. In the old stopes, in the back of the shallow level, we have been breaking some very good ore. In the Balcayana east pitch the ore is very squatty; there is a large bunch in the middle, but the ends are poor. In the 12 ft. level, west stopes, the lode is giving very fair ore. We are doing nothing in Guillen's stopes now, but will set it again next month. Arceche's and Donato's stopes are set at 6s the vara (2½ lbs. 6d. per fath.), and Francis's stopes at 6s; we are breaking good ore in all of them. I think we shall dress about 80 tons next month. Ore dressed and weighed in this month, 1400 quintals (about 64 tons).

No. 2 COPPER MINES.—We have done nothing in the shaft this month. We have finished the pit in the 13 ft. level, and are driving thence to cut the north branch. We have holed to the old works, and are now without fear of a body of water coming down the shaft. The lode is looking extremely well. We are getting our dressing-floors ready, but we shall have to pile away our main stuff for the present. We have a lot of cobalt ore ready for sale.

No. 4 LEAD MINES.—We are driving now on a cross-course to come under the old works, with the hope of unwinding them. I have nothing new to report on this work; we are driving on the small branch cut in the adit, and have just received from the mine a fine stone of lead broken there yesterday.

No. 5 COPPER MINES.—In the eastern level the ore bank has been completely cut off by a bank of white clay heaved across it. It has been stopped until I make a visit there next week. The end in the level in the western patch is not looking quite so well. The greater part of the miners are working in the quarry and dressing-floors. The furnace work has been the same as usual, with an increase in the produce, which has been 637 quintals (about 29 tons).

During the month, the company have sold, at Swansea, a cargo of copper (per the *Minerva*), consisting of 135 tons, for 1166l. 7s. 6d., and a cargo of about 100 tons (per the *Junonia*), has arrived at Swansea, and will be sold on the 22d of May.

The Wildberg Great Consolidated Mining Company have received the report of the mining captain, dated May 3:—West Mine: The lode in the Blumenberg sink will produce 8½ tons of silver-lead ore per fath. No. 2 middle stopes will produce 4½ tons of silver-lead ore per fath. Beck's lode, driving east from the south cross-cut, will produce 3½ tons of silver-lead ore per fath.; the lode in Beck's rise, east from the south cross-cut, will produce 4 tons of silver-lead ore per fath. East Mine: Dean's lode, driving west from Michael's shaft in the 30 ft. level, will produce 1½ tons of silver-lead ore per fath. Dean's stopes, in the back of the 30 ft. level, west of Michael's shaft, will produce 3½ tons of silver-lead ore per fath. The Weitling winze, sinking below the 20 ft. level, east of Michael's shaft, will produce 2½ tons of silver-lead ore per fath. The Donnergrang winze, sinking below the 15 ft. level, east of Michael's shaft, will produce 4 tons of silver-lead ore per fath. Carter's engine-shaftmen are engaged in cutting abroad the cross-cut leading from Carter's engine-shaft to the Erbfeistergang and the Donnergrang lodes. All our surface works are progressing rapidly, with the exception of the stone carrying from the quarry for our new buildings. We cannot get horses and carts for money, in consequence of their being so busy engaged in putting in the corn and potatoes. The engineers are still progressing well with their work. The water-wheel for the blast-furnace at the smelting-works is completed. The setting-list for May and the measurement for April shall be sent on the 10th inst. The returns for April enclose.—J. M. CAMPBELL.

The Kinshild Mines have, according to the last advices, considerably improved, and the directors have recently expended about 2000l. in the erection of new buildings. It is calculated that the profit from the new batteries will alone pay the whole working cost of the mines. It is intended to issue a portion of the forfeited shares, to be allotted *pro rata* amongst the existing shareholders at 3l. per share, which is considered as a bonus. We are informed that the company's affairs in London are conducted free of expense.

The Agua Fria Gold Mining Company have advices to the 28th March last. In consequence of the commercial crisis, and the difficulty of obtaining money, the works had been suspended, but were resumed on the 21st March. The underground operations had been carried on, and the mine further developed. They had 21 heads of stamps at work, which crushed nearly 3 tons per head in 24 hours. Some of the men had been paid with a portion of the gold obtained by the week's work, and the balance, 182 ozs., had been sent to the mint at San Francisco.

The foreign arrivals at Swansea include—from Barbina, 140 tons of silver ore; from St. Malo, 72 tons of silver ore; from Rosen, 163 tons of copper regulus; from Cuba, 493 tons of copper ore; from Gibraltar, 802 bags of copper ore, and 495 bars of lead; and from Garrison of 14 tons of copper ore. There have also arrived, the *Countess of Bective*, and the *Lady Frie*, from Cuba, and the *William Marsland*, from Coquimbo, laden with copper ore.

From California, we have advices to April 1, by the *George Law*, which arrived at New York on the 24th, with 277,800 cwt. treasure. Trade in California had not improved; money was difficult to get; but the miners are generally reported to be doing well. The excitement regarding the new Kears River Mines had subsided. The amount of gold shipped from San Francisco for the first quarter of 1855 was \$9,910,313, less than in 1854 by \$1,768,857.

From Australia, we have advices to the 15th Feb., by the *Champion of the Seas*, which arrived in the Mersey yesterday. She left Melbourne on Feb. 15, and brought, besides the mails, 240 passengers. Her freight consists of nearly 50,000 cwt. of gold, and wool. She reports the arrival at Melbourne of the *James Bonin*, on the 12th Feb., in 63 days, from Liverpool. Also the following vessels at Melbourne:—the *Goldenfield*, *Marwell*, *Gipsy Bride*, *Almora*, *Glenmorra*, from Liverpool; the *Amazon* and *Cassian*, from London. On Thursday, the *Victoria* also arrived, having on freight 30,000 sovereigns, and the *John Bull* with 190 ozs., and 25,000 sovereigns. The following had sailed for London:—The *Pizar*, *Edith Rose*, *Amazon*, *Born*, *Cord*, *Stoboth*, and *Eliza Goddard*.

From Sydney, the *Ellenborough* has arrived with 1550 ozs. of gold, valued at 2000l. The rate is also reported, and shortly expected, but the amount of gold on board, if any, remains to be ascertained. The total value of the arrivals of gold during the week amounts to about 281,700l.

The Melbourne banks, on the 3d of Feb., reduced the rate of exchange 1 per cent. They now purchase bills at 1 per cent. discount, and issue drafts at 1 premium.

The mining accounts are reported to be favourable, and generally improving, though large shipments of gold take place. The price of gold at Melbourne, 3l. 15s. 6d. per oz. large shipments of gold take place. The price of gold at Melbourne, 3l. 15s. 6d. per oz.

The *Lucy N. Hall* has arrived at Swansea, with upwards of 600 tons of silver ore from Chili. By this vessel the Copiapo Mining Company have received silver ore estimated to be worth about 10,000l. sterling.

The *Anne Foster*, from Adelaide, has 220 tons of copper ore on freight, consigned to the English and Australian Copper Company.

The Alten Mining Company have received advices of the shipment of 100 tons of refined copper, from their works in Norway, the arrival of which is daily expected at Newcastle-upon-Tyne.

The Fort Bowen Mining Company have convened their annual general meeting for Monday, which is looked forward to with some interest, from the favourable accounts recently received from the mines. The directors, we are informed, have had numerous applications during the week for the reserved shares.

The Imperial Brazilian Mining Association half-yearly meeting will be held at the office on Thursday next.

The adjourned meeting of the Holmshush Mining Company will be held on Wednesday next.

The Great Cowrah Mining Company have called a meeting for Monday, at which Mr. Low is expected to attend, and explain the prospects of the future operations with respect to gold.

At the National Provincial Bank of England meeting, on Thursday (Mr. Laurie in the chair), the total balance in favour of the company was 180,800l. 13s. 6d. out of which a dividend, at the rate of 8 per cent., and a bonus of 6 per cent., was declared. The proceedings, which are detailed in another column, terminated with a vote of thanks to the chairman.

In the Gold Mining Share Market, a small amount of business was done yesterday in the following:—Anglo-Californian, ¼; New Granada, ¼; Nouveau Monde, ¼. The closing price of *Agua Fria* was ¼; *Carson Creek*, ¼; *Columbia Gold*, ¼; *Great Nugget Vein*, registered, ¼; *Quartz Rock*, ¼; *Waller*, ¼; *West Mariposa*, ¼ to ½.

In Miscellaneous Shares, a fair amount of business has been transacted throughout the week, and improved prices generally obtained. Crystal Palace shares have been freely dealt in at 3¼ to 3½, and the closing price yesterday was 3¼ to 3½. Land shares have also remained firm, transactions taking place yesterday in Australian Agricultural at 29¼; Scottish Australian Investment, 1½; ditto New, ¼; ditto South Australian Land, 36¼; General Screw Shipping Company, 14¼; Royal Mail Steam, 69¼. The closing quotation of the Berlin Water-Works was 3½ to 3½, ex int.; Electric Telegraph, 16 to 17; Mexican and South American, 6¼ to 7; Netherlands Land, ¼ to 1½; North British Australasian, ¼ to 1; Peel River, 2½ to 3; Peninsular and Oriental Steam, 50 to 61; ditto New, 11½ to 12; Submarine Telegraph scrip, ¼ to 1; ditto Registered, ¼ to 1; Van Diemen's Land, 13 to 13½. Joint-Stock Bank securities continue to occupy the attention of speculators. At the National Provincial Bank of England meeting, the dividend declared was at the rate of 8 per cent., and a bonus of 6 per cent. Shares changed hands yesterday in Australasia at 50 to 51; English, Scottish, and Australian Chartered, 17; London Chartered Bank of Australia (new), 4¼; London Joint-Stock, 27¼ to 27½; London and Westminster, 43¼; Oriental Bank Corporation, 40¼ to 40½. The closing price of Chartered Bank of Asia was 1 to 1½; Chartered Bank of India, Australia, and China, 1 to 1½; London Chartered Bank of Australia, 20 to 21; New South Wales, 32 to 34; Union of Australia, 68 to 70; ditto New, 7¼ to 8½.

In Iron and Coal Companies, during the week, there has been very little doing; the prices are:—Blancnavon Iron and Coal, 4 to 6; British Iron, 4 to 6; Portland Iron, 1½ to 1¾; Rhymney Iron, 19 to 21; ditto New, 5 to 6; Dutton, 5 to 6.

ADRIAN LAND AND GOLD COMPANY.—In the Court of Chancery, on Monday, an appeal was argued, before the Lords Justices, from a decision of Vice-Chancellor Wood, in the case "Butt v. Montaux." The suit was instituted by the plaintiffs on behalf of themselves and all other shareholders in the Adrian Land and Gold Company, against the defendants, as the managing body of the company, praying that an account might be taken of all moneys received by the defendants on account of the company; that a receiver or manager might be appointed; that the defendants might be removed from the management; and that they might be restrained from dealing with certain shares in the English, Scottish, and Australian Chartered Bank; and that the said shares might be sold for the benefit of the plaintiffs. In Decr. 1852, the company was projected as a *societe en commandite*, with a place of business in Paris and London: the seat to be in the former city. The plaintiffs getting dissatisfied, asked for the production of books, which they alleged was refused, and, thereupon, this bill was filed. The defendants demurred to the bill. They contended that the company was foreign, and that to give the plaintiffs a remedy, the company should have been registered under the Joint-Stock Companies' Act. The plaintiffs rejoined, that the shareholders were principally English, and that the actual place was in London and Australia; and that the company was only formed as a French society, with a view to limited liability. The Vice-Chancellor disallowed the demurrer, on the ground that the parties could legally enter into such an arrangement as between themselves, and it could not be said that the defendants were not bound, supposing the allegations in the bill to be true, to account. Their Lordships expressed their opinion that the arguments in appeal upon the demurrer should not be proceeded with. They directed that the demurrer should be reserved for the hearing, and that the costs of the appeal should stand as costs in the cause. Mr. Daniel, counsel for the defendants during the argument, complained of the false allegations in the plaintiffs' bill, which he stated were filed by a few disappointed stockholders. Vice-Chancellor Knight Bruce said he had read through the bill, and he certainly thought there was a great deal of poetry in it. The above question was only raised upon a technical point, and in effect reverses the decision of Vice-Chancellor Wood in the Court below.

In the Court of Exchequer, yesterday, an action was brought to recover a sum of money for services rendered in respect of a contemplated company for obtaining gold in certain districts in Australia. Mr. Rowlandson (the plaintiff), who formerly lived at Brompton, but now resides in Staffordshire, stated he had been engaged by Mr. Rogers and Mr. Fenton (the latter gentleman having since died) to assist them with his services in regard to the geological knowledge he possessed as to a company they proposed to establish for the purpose of finding gold in a certain district in Australia. He stated generally he was engaged by these gentlemen, with reference to the contemplated gold mining company, in giving them his advice and assistance from the 21st of November, 1851, to the 13th of December of the same year. That he had to read many scientific works, in short, to read himself up, for the purpose of forming an opinion as to the probability of gold being found in the district Messrs. Rogers and Fenton had taken, and he had bought a skeleton map at Wyld's, and marked the spots where gold was to be found.

Baron Martin: If I were you, I would have gone out, and got some of it. (A laugh.) In cross-examination, the witness stated he had been appointed consulting civil engineer to an intended company for getting diamonds in Brazil, but quitted it as soon as he found out the character of the concern. As consulting engineer he did, like some consulting barristers, very little to do. The diamond company failed because he withdrew his name as consulting engineer, and from an article in *Punch*. (A laugh.) Was never consulting engineer to a patent muffle company. (A laugh.) Belonged to an artificial manure company, the capital of which was to have been 90,000l., in 18,000 shares. It also appeared that Rowlandson, in a letter written to Mr. Pattison, at Bristol, stated it as his then opinion, in 1852, that no gold mines existed in the district in which he had originally supposed they did.

For the defence, Mr. Rogers (defendant) himself was called, who denied he had engaged the plaintiff, as alleged; and the jury, believing there was no contract, found a verdict for the defendant.

In the Court of Exchequer, yesterday, a case of disputed liability was heard, in which Mr. Evans, a merchant at Aberystwyth, sued Mr. De Castro, a holder of 10 shares in the Court Grange Silver-lead Mining Company, for 13l. 2s., for work and assistance from the 21st of November, 1851, to the 13th of December of the same year. The defence was that although notice had been given, the transfer had never been effected, and that defendant was not a shareholder, the mine being on the Court-book Principle. The Court, taking the facts proved and admitted, overruled the plea, and directed a verdict for the plaintiff, with leave to apply for a nonsuit.

The action, "Vials v. Lord Robert Clinton," reported in last week's Journal, whereby the captain of Court Grange Mine obtained a verdict for three months' wages from his lordship, as an adventurer, was re-argued in the Court of Exchequer, on Monday, when the Court granted a rule for a new trial.

THE DINAS COPPER MINING COMPANY.—In the Court of Exchequer, on Thursday, an action was heard, in which Mr. Pattison, of the firm of Wilson and Pattison, solicitors, sued Jones, the secretary of the company, and others, for 43l. 10s., being the amount paid as deposit on shares. The complaint was that false representations had been held forth, which had induced the plaintiff to take shares, and the jury found a verdict for the plaintiff for the amount claimed.

MINING SPECULATIONS.—Mr. David Halket, shipowner, of St. Helen's place and Herne Bay, underwent an examination at the Court of Bankruptcy on Wednesday. The accounts began on the 1st of January, 1852, with a surplus of 25,367l. The bankrupt now owes to unsecured creditors 16,325l.; to those holding securities, 6860l. The assets were thus stated:—Good debtors, 2581l.; doubtful debtors, 1358l.; mining shares, 2809l.; steam-tugs, 700l.; property held as security, 6583l. The profits were returned at 5074s., of which 3947s. was stated to be on mining shares, 6447s.; on mining shares, 7548s.; on shares, 11,061s.; adventure account, 7191s.; balance of profit and loss account, 141s.; furniture, 906s.; expenses of various kind, about 6000l. Mr. Linklater (for the assignees) requiring time to examine the accounts an adjournment of three weeks was ordered.

The Duxton Iron Ore Company received at the London offices, yesterday, samples of pottery made from the clay on their estate in Northamptonshire. They are very fine specimens of various articles for domestic use, and worthy an inspection by the shareholders, and other parties interested.

A special delegate meeting of coal miners is convened for Monday next, at Mr. Jackson's, Wheatsheaf Inn, Manchester, for the purpose of taking into consideration the present state of the coal trade; also "the rash and unnecessary reduction of wages," commenced at Wigan, but now spreading through other districts. Every colliery, whether in union or not, have been desired to call meetings amongst themselves, to appoint a delegate to represent them at the above meeting.

SHEFFIELD, MAY 9.—Our correspondents (Messrs. E. Smith and Son) state that transactions have taken place in Brightside Mine, at 7½ ex div. Prices generally are stationary, though with rather more enquiry than of late.

HULL, MAY 10.—Our correspondents (Messrs. T. W. Flint and Co.) state that there is still very little doing in their market for mining shares. Buyers are scarce, but, on the other hand, holders do not press their stock for sale. Railway shares are without change of importance; indeed, the only business done now is for investment, although a speculative disposition would, doubtless, soon show itself, if political matters assumed a more settled appearance.

LEAD ORES.

Mines.	Tons.	Price per ton.	Purchasers.
Welsh Potosi	50	£14 15 0	Newton, Keates, & Co.
Laxey	100	£20 5 0	Sims, Williams, & Co.
Newtownards	100	£13 6 0	Walker, Parker, & Co.
Cwmystwith	100	£14 2 6	Newton, Keates, & Co.
East Logias	100	£15 15 6	ditto
East Darren	35	£15 15 6	ditto
Foxdale	100	£15 6 0	Walker, Parker, & Co.
Cubert United	57	£11 4 0	T. Somers.
Wheal Wrey Conds.	57	£11 4 0	Newton, Keates, & Co.
Ticketing at the White Horse Hotel, Holywell, 10th May.			
Maesyrwdd	55	£14 7 6	Walker, Parker, & Co.
Coeleis Llys	55	£15 4 6	J. P. Eytton.
Deep Level	40	£11 11 6	Walker, Parker, & Co.
Talacre	20	£14 10 0	J. P. Eytton.
Holywell Level	8	£14 10 0	Newton, Keates, & Co.
Orsedd	29	£13 18 6	J. P. Eytton.
Merilyn	10	£12 17 6	ditto
Garreg	13	£13 9 6	Walker, Parker, & Co.
Welch Gwyn	60	£14 10 0	ditto
Gurtudnyas	23½	£13 10 0	ditto
Shalleo	10½	£14 10 0	Newton, Keates, & Co.
Rhylwath	17	£15 8 6	J. P. Eytton.
Bryntall	15½	£13 18 6	ditto
Gorn	13	£13 18 6	ditto
North Towy	16	£11 15 0	Sims, Williams, & Co.
Vale of Towy	48	£10 10 0	ditto
Hope Valley	17	£11 0 0	J. Bibby, Sons, & Co.
Round Hill	19	£13 7 6	—
Treowetha	26	£12 5 0	—
ditto	17	£17 10 0	—

BLACK TIN.

Mines.	Tons.	Price per ton.	Amount.	Purchasers.
Porkellis United	5 3 1 24	£62 10 0	£323 6 6	Biscoe.
ditto	1 0 0 23	49 10 0	50 1 0	ditto
ditto	0 6 1 2	34 10 0	10 16 2	ditto
ditto	5 9 3 14	62 10 0	343 7 1	Mellencar.
ditto	1 17 1 4	30 10 0	54 2 10	ditto
ditto	0 16 1 15	38 5 0	29 13 9	ditto

Sold on the 3d May.										
St. Austell Consols.	1	6	1	12	£80	15	0	£80	1	2—Enthoven.
ditto	0	2	2	2	38	0	0	4	15	8— ditto

Great Wheal Vor	17 15 2 17	£	£1060 6 2	—
Teoland Consols	4 10 0 0	£61 7 6	£276 3 9	Daubur.

COPPER ORES.

Sampled April 18, and sold at Swansea May 8, 1855.

Mines.	Tons.	Produce.	Price.	Mines.	Tons.	Produce.	Price.
Knockmahon	129	7½	£28 9 0	African	50	32½	£36 6 0
ditto	88	13	£11 6 0	ditto	10	24½	£27 13 0
ditto	66	11½	£8 3 6	ditto	19	35	£39 8 6
ditto	63	12½	£13 6 0	Holyford	40	18½	£21 5 0
ditto	63	12½	£13 6 0	ditto	34	18½	£20 10 0
ditto	51	8½	£9 1 6	Chili	33	17	£17 15 0
ditto	43	10½	£11 19 6	Cronebane	15	6½	£7 2 6
Berehaven	119	10½	£11 6 0	ditto	2	34	£38 0 0
ditto	80	10½	£11 0 0	Tigrony	2	34½	£38 3 0
African	50	34	£37 19 0	Spanish	13	16½	£19 2 0
ditto	20	27½	£30 4 6				

TOTAL PRODUCE.

Knockmahon	505	£5915 12 6	33	£540 11 6
Berehaven	199	£2127 13 6	17	£182 17 6
African	149	£343 1 6	2	£76 4 0
Holyford	74	£1907 7 0	13	£248 6 0

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Company.	Tons.	Amount.
Copper Miners' Company	108	£1400 11 6
Freeman and Co.	119	£1247 13 6
Greiffell and Sons	171	£2352 16 6
Sims, Williams, Nevill, and Co.	43	£1506 5 6
Vivian and Sons	184	£3043 6 0
Williams, Foster, and Co.	204	£3968 5 0
Mines Royal Company	96	£1384 17 6
Mason and Elkington	34	£697 7 0
F. Bankart	33	£585 11 6
Total	992	£16,387 13 6

Copper ores for sale on May 22.—Cobre 108, 166, 93, 53, 57, 55, 18, 11, 10, 20, 5—Berehaven 116, 95, 115, 114—Bullymurtagh 88, 8, 74, 57, 24, 64, 30, 37—Knockmahon 115, 105, 43—British Slag 52, 21, 13, 22—Peninsular 76, 19—French Slag 43—Molland 27—French ore 10.—Total, 1937 tons.

AVERAGES.

Produce.	Price.	Standard.
British	11 3-16	£12 16 0
Foreign	28½	£13 6 0
Sale	14½	£16 10 6
Totals—British, 797; Foreign, 195=992 tons (21-cwts.)		£128 10 0

AVERAGES OF LAST SALE.

Produce.	Price.	Standard.
British	9½	£10 12 6
Foreign	19½	£21 17 6
Sale	18½	£20 10 0
Totals—British, 159; Foreign, 1132=1291 tons (21-cwts.)		£124 1 6

COPPER ORES.

Sampled April 25, and sold at Tabb's Hotel, Redruth, May 10.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Wheat Butler	151	£3 16 6	Halamaning, &c.	25	£6 15 6
ditto	121	6 11 6	ditto	23	9 9 6
ditto	91	7 0 6	Rosewarne United	82	6 8 6
ditto	85	6 10 6	ditto	48	6 17 6
ditto	83	6 18 0	ditto	42	12 10 0
ditto	76	6 7 0	ditto	39	5 16 7
ditto	67	5 7 0	Levant	66	7 7 6
ditto	47	10 14 6	ditto	41	0 13 6
ditto	46	3 12 0	ditto	40	9 13 6
West Wheel Basket	103	5 17 6	ditto	33	4 3 6
ditto	80	3 18 6	ditto	3	17 5 6
ditto	72	3 15 6	West Alfred Consols	52	3 4 6
ditto	71	7 6 6	ditto	47	2 1 6
ditto	67	6 12 0	ditto	38	3 7 6
ditto	53	11 10 0	ditto	15	3 14 6
ditto	51	11 12 0	Great Wheel	82	3 14 6
ditto	47	9 9 6	ditto	37	2 8 6
ditto	36	8 9 0	ditto	30	7 15 6
ditto	35	16 4 0	South Crenver	78	3 11 6
ditto	33	2 17 6	ditto	61	2 7 6
Carn Brea	88	10 7 6	ditto	9	10 1 6
ditto	87	4 19 6	Clijah and Wentworth.	64	3 14 6
ditto	65	7 12 6	ditto	36	7 3 6
ditto	59	2 10 6	ditto	38	6 6 6
ditto	53	2 5 0	Bolling Well	75	4 1 6
ditto	45	3 11 0	ditto	30	13 12 6
ditto	41	14 9 6	ditto	29	2 8 6
ditto	40	12 17 6	Botallack	43	14 1 6
ditto	39	2 13 0	ditto	41	12 14 6
Par Consols	71	2 18 6	West Porey Consols	65	9 1 6
ditto	70	14 3 6	Cook's Kitchen	60	9 14 6
ditto	67	13 11 6	West Looe Providence	51	16 2 6
ditto	57	13 11 6	ditto	31	16 2 6
ditto	56	7 14 6	Treloweth	45	4 8 6
ditto	55	15 18 0	ditto	6	13 5 6
ditto	45	6 12 6	Wheel Friendship	33	6 1 6
ditto	37	17 15 6	ditto	8	2 13 6
Alfred Consols	110	6 18 0	Wheel Margery	35	6 17 6
ditto	82	14 8 6	North Wheel Unity	17	2 5 6
ditto	81	11 6 6	ditto	6	8 13 6
ditto	40	2 14 6	East Bauler	26	11 1 6
ditto	33	3 15 6	Camlorne Consols	10	1 1 6
North Basset	90	6 8 6	ditto	8	6 17 6
ditto	45	19 14 6	Trelayn Consols	12	0 12 6
ditto	40	4 3 0	ditto	4	13 7 6
ditto	36	5 13 0	ditto	1	40 1 6
ditto	28	27 12 6	Kenney	11	7 8 6
ditto	26	27 10 0	Treasury and Truthful	7	4 18 6
ditto	23	23 11 0	Great Wheel	3	4 10 6
ditto	19	5 7 6	East Wheel Vor	3	4 10 6
Halamaning	84	5 7 6	Great Work	2	27 16 6
ditto	62	5 16 6	Tranack and Bosence	2	11 16 6

Notices to Correspondents.

* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly filed on receipt: it then forms an accumulating useful work of reference.

PHOSPHATE OF LIME.—Sir: In reply to the enquiry of "Alpha," in your last Journal, some picked specimens of mineral phosphate, called "coprolite," I find to contain 90 per cent. of phosphate of lime. I have many analyses of the stone as dug, the average is—

Phosphate of lime	60-10
Carbonate of lime	15-80
Oxide of iron	6-30
Alumina	6-10
Siliceous matter	7-10
Moisture	4-60=100-00

It can be obtained in any quantity at Harwich, in Essex, and at Ipswich, in Suffolk. It is estimated that 70,000 tons are used annually in the manufacture of superphosphate of lime. —J. HARRIS: *Dolgelly, May 8.*

MR. CALVERT AND THE DOLGWYNOG MINE.—Sir: If notoriety is obtained by publishing extraordinary statements, without their having the least pretensions to truth, I think Mr. Calvert bids fair to stand in that unenviable position. That gentleman's assertion, inserted in your last week's Journal, has caused a little sensation in the capital of the Welsh gold regions (Dolgelly and elsewhere) "that eight parts out of every nine of gold are wasted at the Dolgwynog Mine," &c. In calling upon Mr. Calvert to substantiate this assertion, I do so not only upon public but also upon private grounds, having recently reported upon the Dolgwynog Mine, and that in direct contradiction to Mr. Calvert's statement. I trust Mr. Calvert will see the necessity of giving your readers, without loss of time, some proof of his assertion (if he really has any), and also the names of the others who are committing such wilful waste by the anybody's process. —J. HARRIS: *May 8.*

PUDDLING IRON—INVENTION RE-PATENTED.—Sir: I find in your Journal of the 5th inst., a description of a patent taken out by Mr. Nasmyth, of Manchester, for an improvement in the process of puddling iron, by the injection of steam or water beneath the surface of the molten metal. A patent for the same thing was granted to the late Mr. Thomas Ennis, manager of the Down's Works, 12 years ago, and may be seen now in operation at many of the works in this neighbourhood. Mr. Nasmyth's patent, therefore, goes for nothing. —A. PUDLER: *Morristhry Tyddil, May 8.*

HARRIS'S PATENT CUP SURFACE BOILERS.—A full description will be found in the *Mining Journal* of the 3d of February last.

"Inquirer" (Birmingham).—The quantity of Banca Tin on hand for sale on the 31st March last was 40,400 slabs, or 1212 tons, in Holland; in London there were 778 tons; the total quantity being 72,300 slabs for the next Dutch sale. The quantity last year was 77,500 slabs.

NORTH BRITISH AUSTRALASIAN COMPANY.—Sir: It may be satisfactory to your correspondent "Allegiance," as well as others, particularly shareholders in Scotland, to learn that the directors generally would have been well satisfied with a vote of 300l. per annum for their services, and the majority consider 400l. very handsome. As a committee for the transaction of business, they rarely meet oftener than twice a month, so that each member will receive more than two guineas a sitting. If more satisfactory returns cannot be made to the shareholders, it will be proper to curtail expenses by lessening the number of directors to three, who, with the two managing directors and the secretary, would amply suffice for all that is required. —OBSERVER: *60, Finchchurch-street, City, May 10.*

"T. C. S." (Baker-street).—It does not follow that a company should be strong because high-sounding names are attached to it. Unfortunately, in the gold mining delusion, several of these associations were got up with peers and baronets for directors. Nearly all have failed, either through mismanagement or dishonesty.

Sir: I quite agree in the opinion expressed by "A Shareholder" in his letter dated April 25th, and published in your Journal of the 28th; and I would suggest, and join in, a requisition by proprietors, calling upon the mine committee to hold the next meeting in London, and desiring the pursuer to bring his cost-book and monthly vouchers with him for inspection. I am pretty sure I am a party interested in the same mine as that to which "A Shareholder" alludes, and I will join in any measure likely to tend to a more economical and satisfactory working of the mine in question. It is essential to see whether all calls are paid up, and that a few shareholders are not contributing to the advantage of the many. —ANASTASIOUS: *May 9.*

PEEL RIVER LAND AND MINERAL COMPANY.—The clip last year from 52,000 sheep was contained in 306 bales; gross weight of wool, 992 cwts.

"J. H." (Dolgelly).—Although experimental results have been published, yet no working has taken place on a large scale, and, however feasible the extraction of gold may be, the public will be sceptical until they see some practical results; the question has not only to be chemically, but likewise commercially tested.

"Miner" (Cambridge).—Earthy phosphate of iron is found in solid masses in the argillaceous deposits of New Jersey, occasionally with bog-iron ore. Also, in Styria, Carinthia, and in Greenland; the friable varieties have been met with in forming excavations in the river mud of the Isle of Dogs, in the same deposit at Toxteth, near Liverpool, on the surface of peat masses in several of the Shetland Isles, at Ballagh in the Isle of Man, accompanying animal matter, particularly the bones of the elk and deer, and elsewhere. It is sometimes employed as a pigment.

NORTH BRITISH AUSTRALASIAN COMPANY.—The gross profit for the year 1854 was 17,507l. 11s. 11d., and the total charges of management, both in the colony and in London, for the same period, 3790l. 18s. 9d.: leaving a net profit of 13,726l. 18s. 3d.

PORTABLE MINING ENGINE.—Sir: In reading a report of a meeting of the shareholders of the British Australian Gold Mining Company, I was rather struck with the fact that the more economical and satisfactory working of the mine in question had been stopped, in consequence of the accidental fracture of the mine wheel of the engine supplied by Messrs. Medwin and Hall. Without wishing for a moment to enter into the private affairs of the company, to criticise the conduct of Mr. Dyer in this business, or to canvass the views of the directors on the occasion of this meeting, I yet think it possible that the publication of the report in question is not unlikely to prove detrimental to that portion of the mining interest which may stand in need of portable power. The accident is stated to have arisen from a flaw in the casting. This may, or may not, have been the case. The products of every foundry in the kingdom are liable to imperfections, and it is to be expected that they frequently escape detection. My sole object in calling attention to the subject is this: I think that a really useful invention should not be depreciated in public estimation by a reported casualty occurring at the antipodes. I think that Messrs. Medwin and Hall's engines are sufficiently well known for general excellence of manufacture to leave room for the encouragement of a doubt that due care and supervision were not exercised in the present instance. —OBSERVER: *May 10.*

"C. W." (Hoxton).—The exports of tin-plates to New York, the first three months of this year, were 20,784 boxes less than the corresponding period of last year. The general opinion is, that this branch of trade, although it has been some time depressed, has seen its lowest, and a rally is confidently anticipated.

PRACTICAL MINING—FACTS & THEORY.—Sir: Perusing the various letters of Mr. Enner, and of "G. D.," I have been much interested, and do not at all doubt but that both parties are only sincere, and, therefore, entitled to the approval of all thinking men. With "G. D." I have been particularly well pleased, and consider his arguments both fair and honest, and his remarks sober and reasonable. But there is one point in his last letter in your valuable paper which rather staggers me; he states that ores of 50 tons bulk, containing 4 ozs. of gold to that quantity, are profitably treated at Schenitz, in Hungary. May I presume to ask, does he mean to say that they are treated for gold alone, or in connection with other ores of commercial value? And, if so, what might this treatment be, or to what work could he be so obliging as to give me reference on this subject, as I am particularly desirous of gaining all information I can thereon, having now a few possession quantities of gold-bearing stuff, containing from 1 to 3 ozs. to the ton, and not to the 50 tons? But I do not know how to treat it satisfactorily—that is, to get out of the ores what I ought to do. If "G. D." would favour me by a line in reply, it would be duly esteemed by your constant and interested reader—C. S. D.: *Birmingham, May 9.*

MINING IN SCOTLAND.—Sir: Can any of your numerous correspondents inform me the name and address of an eminent mining captain resident in Scotland, and whose report would be esteemed a guarantee by your Scotch friends. —AN OLD SUBSCRIBER: *Carlisle, May 9.*

AUSTRALIAN FREEHOLD GOLD COMPANY.—Sir: It appears from your observations last week, that a certain party has succeeded in carrying the affairs of this company into the Court of Chancery, to the injury of those unfortunate holders who were too late to obtain the shares which they have taken these proceedings to get back care to receive their dividend, I shall be glad to know what means can be taken to place us in the same position, before the balance in hand is consumed in law costs, which is evidently the principal object now in view. —A SHAREHOLDER: *May 10.*

DEVELOPMENT OF COAL.—We have not received any additional particulars respecting the experiments referred to in the Journal of the 31st of April; but if any correspondent can furnish us with details, we shall be very glad to publish them, the subject being one of much interest to our readers.

"T. C. B." (Brighton).—Both the English and French Governments have entered into large contracts for lead: the English have already, in this year, advertised for 3500 tons; the French have asked for 1500 tons, and probably will require the same amount before the termination of the year. The Stolberg Company have closed their works. The demands for lead, owing to the present war, will amply compensate for the deficiency which arose from the prohibition of the export to the North of Europe. The shipments of this metal to New York, from the 1st of Jan. to the 18th of April, was 1600 tons, of this 600 tons were shipped from London, an equal quantity from Liverpool, and 300 tons from Marseilles.

WEST GRANADA AND FORT BOWEN MINING COMPANIES.—We have received a very long communication from Capt. James Eddy, former manager to the West Granada (Veraguas) Mining Company—who, with a staff of miners, proceeded to the mines in 1853, but with no subsequent good results—on the subject of the misunderstanding which arose between himself and the directors in consequence, and involving a repetition of details of circumstances which we had hoped were buried in oblivion. As public journalists, our province is to detail matters in which the shareholders and the public are interested, but we cannot interfere in the communication of Mr. Loock Webb, of the 17th of June last, there can be no doubt the charges made against Mr. Eddy, in extracts there inserted from letters from the mines, must have been exceedingly hurtful to his feelings; but we gave him the fullest opportunity for reply, of which he availed himself, and by which he must have, to a certain extent, set himself right with the public. We can really see nothing in the advertisement of the Fort Bowen Company, in the *Mining Journal* of the 21st of April last, to call for the very lengthened remarks made by Mr. Eddy. Mr. Webb, as secretary to the company, says:—"Mr. James Eddy went out in 1853, and sent home specimens of the ore, mixed with much rubbish." Mr. Eddy says:—"It is very possible that the specimens were mixed with rubbish; if they were, I can only say that they were mixed by an infinite, and not by a finite being, at some geological epoch of which I have no knowledge." After again enforcing his views respecting the mines and the climate, he enters at great length into the defence of his character, for the insertion of which, although anxious to do justice to all parties, our space is not sufficient. It is now nearly 13 months since the commencement of the discussion in question, and too late to sweep up a repetition of old grievances without apparent cause; and we think neither the interests of the company, nor those of Mr. Eddy himself, will be advanced by further controversy.

We have particularly to request that subscribers and others, in paying accounts, will send cheques or post-office orders, as postage-stamps cannot be received.

"Agricola."—Assuming that the individual sinking the pit had a right to do so, then, as "Agricola" has no property in the spring of water upon his farm, he has sustained no legal injury by his well being laid dry, it having been decided at law that the owner of land through which water flows in a subterranean course has not such a right or interest in it as will enable him to maintain an action against a neighbouring landowner who, in improving his own soil by draining, or by carrying on mining operations in his own land in the usual manner, drains away the water from the land of the first-mentioned owner, and lays his well dry; for in such cases the water by which the well is fed, though percolating through the soil by an indefinite number of subterranean courses, yet has no visible or definite course, and so is not the subject of property. "Agricola" has sustained no legal injury, and, therefore, has no case for redress. His unfortunate position is one which comes within the legal category of *damnum absque injuria*.

THE ELECTRIC COMPANY (SHEPARD'S PATENT).—Sir: Can you inform me whether this company is abandoned? A report was circulated a short time since that it was to be re-constituted, and a new prospectus issued. —A. Z.: *Lothbury, May 10.*

HEMATITE IRON FOR GUNS.—Sir: Now that it has become of such immense importance that our cannon should be made of the best material, why is not hematite iron used for that purpose? It is well known that it is "red short," or, in other words, that at a red heat it is perfectly brittle, but that when cooled down it is the toughest of all our British iron—so much so, that you cannot break one of the pigs with a sledge without first cutting it round with a cold chisel. Such metal, there can be no doubt, would make guns equal, if not superior, to the best iron the Russians can procure; and there is abundance of the iron to be found in Cumberland, near Whitehaven, and the Furness district of Lancashire. —J. B.: *Essex Wharf, May 11.*

ORKE TOM.—The quotation was furnished us by a correspondent, to whom we will forward any communication that may be sent us for that purpose.

WELSH POTASS MINE.—Sir: In answer to a letter in your last impression, calculated to cast some doubt on the proper management of these mines, I beg to observe that I am residing in the locality, and have had every opportunity of seeing and hearing what has taken place, and I regret to say that the late rebellion amongst the men was most disgraceful, and the treatment of the manager experienced unwarrantable in the extreme, and such as only a man of his experience, perseverance, and business knowledge could cope with. I can assure the writer that the changes, both in agents and workmen, that have been made will be found most beneficial to the shareholders. The mine is now working most profitably, and never looked so well; the quality of the ore ground laid open within the last month is surprising, and the energy and zeal of the company's managing director cannot but be highly gratifying to the shareholders at the next general meeting. —A SHAREHOLDER: *Aberystwith, May 10.*

PATENT WIRE TYPE.—Sir: A few years since I was induced to take some shares in the Patent Wire Type Company. I have several times since endeavoured to obtain information relating to the company, but without success. If any of your readers could favour me with some information thereon, or inform me how I can procure a return of the money paid for the shares, they would oblige—A REGULAR SUBSCRIBER: *Southampton, May 10.*

AUSTRALIAN CORDILLERA COMPANY.—The letter from "One in the Secret" can only appear as an advertisement.

SOUTH WHARF ROBERT.—Sir: Your correspondent of last week, "A Lover of Justice" (Hortabridge), considers this sett should be examined, and reported on, by some independent agent. Does the writer want a job? If so, we would wish him to defer his visit until we have cut the black cross-course, which was thrown in this direction some months since by a shale, till which time I hope every adventurer interested will satisfy himself by personal inspection, or from the reports of those who speak the truth. —A LOVER OF TRUTH: *May 9.*

TASMAN LEAD MINE.—The letter respecting the legal proceedings taken by the pursuer for the recovery of calls can only appear with the writer's name attached.

WALLER GOLD MINING COMPANY.—Sir: The report in the *Mining Journal* of last week from this mine is as follows:—"At the date of the advices (April 14) the works were proceeding satisfactorily, as the fine weather had fairly set in. A quantity of ore had been raised at the upper shaft on the Waller vein, the yield being fully equal to that last reported, and sufficient to keep the stamps going for a long time to come." Will the directors be good enough to explain, through the columns of your excellent paper, how this meagre account tallies with the report laid before the shareholders at the general meeting, held on the 21st of Feb. last. They then reported—"There were 3500 tons of ore raised, valued at 11,500l. That the machinery had been returning since the beginning of the year 250l. per week." And, further, "They promised to pay a dividend in three months" from that date. Now, why raise a further quantity of ore until the 3500 tons have been crushed and returned? If it has been crushed, what has become of the 11,500l.? And where is the produce from the "yield equal to that last reported," as no remittance of gold has yet arrived home? —A SHAREHOLDER: *May 10.*

"An Adventurer" (Chelsea).—There have been large supplies of foreign copper ores, but, as there is no great demand for the metal, it is not estimated that there will be any considerable fall in the price.

Works published at the MINING JOURNAL office, 26, Fleet-street, London:
GEOLOGY AND MAGNETISM. By EVAN HOPKINS. 16s.
GEOLOGY AND MINING—FOUR LECTURES BY G. HENWOOD, Esq. 2s. 6d.; by post, 3s.
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THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, MAY 12, 1855.

The bill we briefly noticed in our last week's Journal, and which has been framed in order to amend and extend the jurisdiction of the Stannary Court, has passed the House of Lords, and we alluded to some of the amendments intended to be proposed when it shall be introduced into the lower House of Parliament. As it may be fairly assumed that a legislative measure, prepared under the sanction of and presented by the highest legal authority, the Lord-Chancellor, will be very speedily brought before the Commons, it is highly desirable that the constituencies who are interested in, and likely to be affected by its enactments, should be put fully into possession of their bearing and effect. The 1st section provides that when any mine or sett within the Stannaries shall be worked by the same adventurers, not only for metallic minerals within the jurisdiction of the Court, but also for non-metallic minerals found therein, or intermixed with metallic minerals, the entire mine, works, or products shall be taken to be within the cognizance of the Vice-Warden, as if the same had wholly consisted of metallic minerals, and the process of the Court shall extend and be exercised over the same, and all the machinery and materials thereon, as in the case of mines of metallic minerals, and the mineral called plumbago, or black lead, is thereby declared to be a metallic mineral. The 2d, or interpretation clause, provides that the words "mine," and "mineral," and "miner" in the Act, or in any pleadings, process, or proceedings in the Court shall, unless otherwise explained or qualified, be held to mean a metallic mine or mineral within the jurisdiction of the Court; and a miner in some mine, work, or adventure, within the same jurisdiction, having privilege to sue or be sued in the Court. And the words "County Court" shall be held to include not only courts known by that name, but also the Court held under the provisions of "The London (City) Small Debts Extension Act, 1852."

It may, perhaps, be worthy of the attention of those interested in adventures connected with mining operations within the Stannaries to consider whether this interpretation clause is sufficiently extensive. One of our high courts has been lately occupied with the question, whether certain quarries do not, under peculiar circumstances, come under the generic denomination of mineral property; may it not be prudent, therefore, to set the matter at rest by express enactment? The interpretation clause is a simple and convenient mode of applying the provisions of any modern legislative measure to particular classes of matter; and if the present form be deemed defective, a few words, cautiously and appropriately introduced, may, by embracing what is requisite or essential, provide for and remove many future difficulties.

We alluded shortly in our last to the powers conferred on the Court of suing by its process non-resident shareholders for contribution, the 3d section providing that, in suits in the equity side of the Court of the Vice-Warden, prosecuted, according to custom, by the pursuer or other principal agent of the adventure in a mine in the Stannaries against an adventurer, or his personal representatives for contribution to calls, or to the expenses of working such mine or adventure, the Vice-Warden may, upon special application, order that service of process to compel an appearance or answer in any part of England and Wales shall be deemed sufficient, although the party may not be personally within the jurisdiction. It is

then enacted that, upon due proof of service, and default of appearance, the sutor may enter an appearance for defendant, and may proceed as if the party were within the jurisdiction, and that after appearance so entered, all notices and all future process in the suit may be served on the defendant, whosoever he shall then be in England or Wales. The 4th section enacts that in all suits against adventurers for contributions it shall be lawful for the sutor to join several adventurers in one petition for recovery of their several contributions, and for the Court to make one decree for payment, and one order for sale of shares, and to enforce such decree or order by separate process of execution against each defendant. In cases of separate defences, all may be tried together in one suit, and the right to sue non-resident parties in that case, also, is preserved.

The 5th section confers similar powers of suing non-resident parties in suits on the equity side of the Court by creditors against the pursuer or principal agent of the adventurers, or against one or more of the adventurers in a mine in the Stannaries, to enforce payment of their demands by sale of the ores, machinery, materials, and effects, for the time being belonging to the adventurers, and being upon or about the mine, or fraudulently removed therefrom. In case these shall prove insufficient to meet the demands, the principal and important provisions of the Winding-up Acts are introduced, and powers given to the Stannaries Court of settling lists of contributories, and of enforcing their liabilities. The 6th section applies to suits on the equity side of the Court for an account, as between adventurers in mines in the Stannaries, and powers are given of serving the process of the Court in like manner as above on parties residing beyond the jurisdiction; while the 7th section gives similar powers to sue, or join as a defendant in suits, "a person holding, or claiming to hold, any share or interest in any adventure in mines or minerals worked within the Stannaries, or being an agent of the said adventurers who cannot be found within the jurisdiction of the Court." The 8th section regulates the mode of service of the process or orders of the Stannaries Court, as applicable to all the foregoing cases, by declaring that the document to be served in any place out of the jurisdiction shall be sent to the high-bailiff of the County Court in the district in which such place may be, with the lawful fees payable in such cases for service of similar processes of the County Court, and thereupon the high-bailiff shall serve, or cause to be served, the same as if it had been issued out of a County Court, and such service shall or may be proved as in case of County Court process. Our readers will observe that these provisions have been framed with the intention of meeting every description of case which can possibly arise within the Stannaries Court, and of conferring on that Court a jurisdiction over all parties interested in or connected with such case, no matter in what part of England or Wales they may be resident.

The 9th and 10th sections confer the jurisdiction to which we alluded in our last—namely, authority to every Court of Common Law at Westminster of enforcing, in any part of England and Wales the judgments, orders, and executions of the law side of the Stannary Court, and give similar powers to the several branches of the English Court of Chancery with respect to the orders and decrees of the equity side of the local court. The 11th section enables claimants to interplead in respect of goods seized where the property is disputed; and the 12th section makes the adjudication of the Court in such cases of claims final and conclusive. The 13th section authorises the Court to stay proceedings in any action to be brought in any other superior or inferior court against one of its officers, or against any sutor in respect of any such claim; and the 14th section prohibits the Court from entertaining in either of its branches any claim touching the freehold or inheritance of any person, "except by consent of the parties before the Court, and as between and against themselves and those claiming under."

The 15th section is an important one, for it confers on the Vice-Warden power rarely given to inferior courts, of entertaining jurisdiction in ejectment suits for recovery of the possession of mines within the Stannaries, and of buildings, machinery, works, and waters annexed thereto, and occupied therewith, on the ground of breach of condition, determination of the sett or lease, or other lawful or customary case of forfeiture, and also to prohibit the working of any mine, in a manner contrary to custom or covenant, by injunction, in cases and under circumstances in which the Court of Chancery or Courts of Common Law at Westminster would now by law enjoin. It then directs that all proceedings by ejectment on the common law side of the Court shall be according to the Common Law Procedure Act, 1852, so far as applicable; and it enables process for the purpose to be served on parties whosoever resident in England or Wales.

The 16th section then provides that all actions for debts or damages not exceeding 50l., whether founded on tort or contract, when arising within the jurisdiction, may be prosecuted summarily by plaintiff, and tried by a jury of five jurors, except in cases where the Vice-Warden shall permit or direct such action to be by writ or summons; and for the purpose of improving the procedure in such actions by plaintiff, power is given to make and enforce rules and forms for procedure, practice, pleading, and taxation of costs. The 17th section authorises the removal of cases involving mining questions from the County Court; and the 18th prohibits demurrers or pleas to the jurisdiction, except in cases where the want of jurisdiction will disable the Court from doing full and substantial justice between the parties to the suit. The 19th section authorises the registrar, at all times before the hearing or trial, to make interlocutory orders for time, amendments, and other such formal matters; and the 20th section contains a very important arbitration clause, empowering the Vice-Warden to make orders, with the consent of the parties, referring any suit to arbitrators, the submission not to be revocable, except by the consent of the Court, with very summary powers to the Court of enforcing awards. The 21st section authorises the Vice-Warden, at the request of one or some of the parties to a suit, and subject to such terms as may be imposed, to adjourn and hold his Court, or otherwise, to or at any place within the Stannaries, for the purpose of hearing or taking evidence; and for such purpose the attendance of the registrar, secretary, or prothonotary of the Court shall not be necessary at the sittings of the Vice-Warden at such place.

The 22d section is a highly important one, and provides that, in all cases of mines in the Stannaries worked by partnerships, or companies of adventurers, professing to adopt or to be constituted on the Cost-book System or Principle, it shall be lawful for the Vice-Warden, upon application of any adventurer or shareholder in the mine, or creditor of the adventurers, founded on sufficient grounds, verified by affidavit, although no suit be pending touching the said mine or adventure, to compel production, by rule or order, of a list or lists of all adventurers or shareholders for the time being, by the pursuer or other principal agent, or manager, clerk, or secretary of the mine, in whose custody or power the same may be, and whether such person be then within the jurisdiction of the Court, or elsewhere, for inspection of the applicant. It is then provided, that if such list be not then produced, showing truly the name, address, and number of shares of each and every adventurer or shareholder, and the time when each became an adventurer or shareholder, as far as the same are known, or can be ascertained, after 14 days' previous notice served on the person ordered to produce it, and also affixed to the counting-house of the mine, or left at the principal office or house of business of the adventurers within the Stannaries, or elsewhere, the Court shall declare that the partnership, or company, is not carried on, or constituted on, the Cost-book System, or Principle; and the same shall thereupon no longer be deemed or taken for any purpose a partnership, association, or company, within the exemption of mining partnerships, in the Act for the registration, incorporation, and regulation of joint-stock companies, or within the conditional exemption contained in the Joint-Stock Companies' Winding-up Amendment Act, 1849. A similar power is also given by the same clause of ordering the production of the cost-books of the mine, list of adventurers, and such other books and documents relating to the mine, or to the management thereof, as the Vice-Warden shall think proper for inspection of such applicant, and to enforce such rule or order by attachment within the Stannaries, or by causing the same to be a rule or order of one of the superior courts at Westminster. Our readers will observe that although it is merely applying to cost-book mines the principles of the Joint-stock Company Registration Act, these are novel and extraordinary powers; and although they may be, in many instances, highly beneficial, care must be taken that the abuse of them does not prove directly the reverse.

The 23d section gives the Court power to make general rules and orders, which, however, cannot be promulgated, so far as the law orders, without the sanction of one of the judges of the superior courts, or so far as the orders, without the approval of the Lord Chancellor, or one of the judges of the Court of Chancery. The 24th section regulates appeals to the Vice-Warden, and two members of the judicial Privy Council—an important clause, constituting an Appellate Court, to which we referred in our last. The 25th section enacts, that all fines and penalties shall be payable to the expenses of the Court; and the 26th section extends to Devonshire the provisions of the Act of the 2d and 3d of her Majesty's reign, c. 50, for punishing frauds committed by workmen employed in mines in the county

of Cornwall. There are some other minor and comparatively unimportant provisions, to which it is unnecessary more particularly to refer. We have laid before the public the leading principles and enactments of a measure intended to form in itself a code for the legal government of mines within the Stannaries; and the fact of Devonshire being included for a special purpose furnishes a strong reason for the introduction of amendments in the House of Commons, extending its general provisions to that important mining district.

In our last Journal, we stated that we had received several communications from shareholders in Wheal Providence, relative to some individual addressing from Furnival's Inn, attempting to depreciate the value of their shares, and yet concluding with an offer to exchange others for them. We have since had another communication from a correspondent residing in the Isle of Wight, enclosing the following precious *marceau*:-

1. *Furnival's Inn, Holborn, London.*
Sirs,—The Trehan Mine is becoming rapidly exhausted. You will see that the last account was for four months, and that it would have been quite impossible to have paid a dividend, had the balance for the engine been charged. The sale subsequent to the meeting has realised a much reduced price. No dividend can fairly be declared next meeting; the shares must recede. I beg to advise a sale in favour of Kilrains at 8s.; there you have all the elements for a great and lasting property, and a rise may be fairly calculated on of 100 per cent. I am in a position to offer fifteen Kilrains for one Trehan, to the number of five Trehans. If you wish to do the foregoing business, please to communicate with me by letter.—JOHN J. WILKINSON.

Our readers cannot fail to notice the very property the writer wishes our correspondent to dispose of, as "the mine is becoming rapidly exhausted," is what he recommends the West Providence shareholders to take (see last week), "as paying 27½ per cent. on present prices, and with a probable market value of 200 per cent. above the quotation of the day." No wonder he would like to get some *cheap*, and now tries it on with Kilrains, an Irish mine, which will probably share a similar fate in further description. We think it highly desirable that every publicity should be given to such despicable attempts to depreciate shares, and shall continue to expose such proceedings, comment on which is unnecessary.

Our Journal of this day presents to our readers a highly important paper "On the Manufacture of Steel, as carried on in this and other countries," read before the Society of Arts, on Wednesday, by Mr. CHAS. SANDERSON, of Sheffield. We direct particular attention to this valuable communication, in which the extensive practical experience of Mr. SANDERSON on this branch of our national and commercial industry was illustrated by much study and research. Mr. SANDERSON, in addition to being a large steel manufacturer and patentee, may be said to have acquired an European reputation; he is a member of the Imperial and Royal Society at Vienna, having been proposed by the Archduke JOHN OF AUSTRIA. He is, besides, a member of the Society of Arts, Manufactures, and Commerce of France, and also of the Geological, Geographical, and Statistical Societies of Paris, from which latter institution he received a medal of honour. An essay from such an eminent source, on a subject of such general interest, must command very marked notice in this great community. We quite agree with the author of the paper that, since this important branch of manufacture is daily becoming of greater importance, every step towards the production of fine steel iron in this country should meet every encouragement, inasmuch as it tends to render our own resources available to our wants. At present we are largely indebted for our supply of suitable iron for the manufacture of steel to Sweden, the average annual importation from that country for the last 10 years, irrespective of the quantity received from Russia, being 26,011 tons, the whole of which, with very trifling exceptions, has been converted into steel. By the process of puddling iron, invented by Mr. COOK, of Gosport, and introduced in 1784, the steel iron market is now supplied with 15,000 tons of malleable iron; while the weight of steel manufactured in England may be fairly estimated at from 40,000 to 50,000 tons annually.

The kinds of steel at present manufactured are—Natural steel, called raw steel, or German steel; Paal steel, produced in Styria by a particular method; cemented or converted steel; cast steel, obtained by melting steel; and puddled steel, obtained by puddling pig-iron in a peculiar way. In Germany, France, and Austria, with trifling exceptions, charcoal is the fuel used; the quantity, however, is very variable, depending in a great degree upon the dexterity of the workman; the consumption may, as a general average, be estimated at 240 bushels per ton of raw steel produced. The natural or German steel is produced direct from pig-iron, the result of the fusion of the spathose iron ores alone, or mixed in a small degree with the brown oxide, producing a highly crystallised metal, called spiegleisen, or looking-glass iron, on account of the very large crystals it exhibits. Many of the foreign authorities advocate the use of grey pig-iron for the manufacture of steel, but Mr. SANDERSON controverts that opinion, and assigns strong reasons for considering that grey pig-iron is not by any means the best for producing natural steel; and for the same reasons he would not recommend the highly carbonised white iron, although it is now used both in Germany and France. In Austria, they have improved on the general continental process, by forming the metal into cakes, which are then piled edgewise in a furnace, covered with charcoal, and heated for 48 hours, by which process the carbon is very much discharged. By using these cakes in the refining the steel is sooner made, and of better quality, and in the advice which Mr. SANDERSON has given to the German steel-makers, he endeavoured to show that pig-iron could only be freed from its impurities while in a fluid state. The paper then described the different plans of furnaces employed in the German, Styrian, and Carinthian methods, which were illustrated by diagrams, to which we can only now refer.

The raw steel, when produced, is sold to the steel refiners, who submit it to a process of welding, which will be found fully and lucidly explained in the paper. For very fine articles, the refining is increased by several doublings, but this is not carried, at present, to such an extent as formerly, since cast-steel is substituted, being in many cases cheaper. The average price of the refined natural steel sold in boxes is 20s. to 24s. per ton; in bundles, 17s. to 20s.; that of the raw steel sold to the refiners, 16s. to 18s. per ton; while the refined steel increases in price according to the number of times it has been refined. The manufacture of puddled steel is a recent invention. The product is similar to that of natural steel, being obtained direct from crude iron. It is carried on in Westphalia, but the steel is imperfect, as too much depends upon the manipulation of the process. Such is its acknowledged inferiority, that while charcoal natural steel sells for 18s. per ton, the puddle steel will not command more than 14s. per ton, and an equal reduction is made on the refined steel manufactured from puddled steel blooms. The Paal method is so called from the name of the works belonging to Prince SCHWARTZENBERG, near Murau, in Styria, and the process is based upon the old one of Vanadoc. It consists in plunging iron into a bath of melted metal; the carbon of the metal combines with the iron, and in a very short time converts it into steel. The operation requires great care, for if the bars of steel be left in the metal too long, they are more or less destroyed, or perhaps entirely melted. A more regular steel is, however, commonly obtained than that produced by the common process, and it commands a higher price in the market, being chiefly consumed by the home manufacturers, excepting a portion exported to Russia. In all those processes, the carbon is derived from the metal itself, but there is a distinct system, by introducing carbon into the iron, converting iron into steel by cementation. Iron to be thus converted is placed in a furnace, stratified with carbonaceous matter, and heat being applied, the carbon is absorbed, and a new compound thus formed. The paper described the process minutely, and then proceeded to explain the manufacture of bar-steel, the price of which varies according to the price of the iron from which it is made; but, as a general average, its price in commerce may be taken at 5s. per ton beyond the price of the iron used. The following may be taken as the approximate prices in 1854-5:—Shear steel, in ordinary size, 60s. per ton net; coach-spring steel, from foreign iron, 22s.; from English, 18s.

In the several descriptions of steel thus manufactured, want of uniformity of temper and clearness of surface have unfitted them for many useful purposes. This has led to the production of cast-steel, for which both bar, converted, and also raw-steel, is melted; the metal thereby freed from any deleterious matter which the iron may have contained, an uniform and homogeneous texture obtained, with equality in temper and hardness; besides which, it is capable of receiving a high, clear, and beautiful polish. The foregoing outline is sufficient to show that the paper of Mr. SANDERSON gave condensed descriptions of the raw materials required, and of the several processes used, in the manufacture of each kind of steel employed in commerce. The fuel used in England for the manufacture of steel is entirely coal and coke; the former is used in the converting furnace for heating the cases which contain the bar-iron during the process of cementation. In a properly constructed furnace, one ton of good hard coal is consumed in the conversion of one ton of iron, thus representing a con-

sumption of between 40,000 and 50,000 tons of coal per annum. Coke is used in the melting process, the consumption averages 65 cwt. per ton of ingots; and, although there exists no means of exactly ascertaining the weight of cast-steel annually manufactured in England, it may be estimated at from 25,000 to 30,000 tons, which would represent a consumption of 81,000 to 97,000 tons of coke; and assuming that coal will produce 60 per cent. of coke, the consumption of coal would be from 113,700 to 136,500 tons. Contrasting the steel manufacture of England with that of America and the continent of Europe, it would be seen that we produce a greater weight of steel than all the other countries combined; and we have his high authority that, by a comparison of the degree of perfection attained in each country, England eminently excels in this branch of manufacture. Mr. SANDERSON presented to the meeting specimens of every article he described, and submitted minute statistical details, to which we must refer our readers. The following results, however, showed the productive capacities in this important branch of manufacture of the different states:—

	Tons.	Average value of
France.....produces	14,954	£445,850
Prussia.....	5,453	170,824
Austria.....	13,037	320,073
United States.....	10,000	212,500
England.....	40,000	1,470,000

Such is the contrast of the manufacturing power of the steel-producing countries, showing the eminent position of England in both weight and value, and thus demonstrating the practical skill and scientific knowledge which have been brought to bear in this country upon its manufacture, and by no man more than by the eminent author of this important paper.

Previous to the discussion, a letter from Mr. HARRY SCRIVENOR to the secretary was read, stating—

"The process of the manufacture of steel is generally but little known in this country, but it is, and is still more becoming, a most valuable addition to our home manufacture. And it is with somewhat a proud feeling, we may say, that while we almost monopolise the make of iron, we can also so far naturalise the make of steel, that in its production we are enabled to leave all other countries far behind us. The great improvement in the manufacture of steel is stated by Dr. Ure to have originated with Mr. Josiah M. Heath, who took out a patent in 1839. One immediate consequence of his discovery was a reduction in the price of good steel in the Sheffield market of from 30 to 40 per cent. His claims have been disputed, and Mr. Sanderson says the great question of the late Mr. Heath's patent is now before the House of Lords for their final decision. Mr. Heath's patent introduced a portion of carburetted manganese into the melting pot, along with the usual bars of blistered still, and he found that a common bar steel, made from an inferior mark or quality of Swedish or Russian iron, would, when so treated, produce an excellent cast-steel. I was lately speaking to a steel manufacturer of Sheffield on the subject of this patent. He said we use no manganese in our improvements, and the steel was made from English materials. Some years back I was connected with a company which had steel-works, and the principal foreign iron which they used was a celebrated Russian make (the Demidoff mark). This mark is not mentioned by Mr. Sanderson; but from an observation he makes that, 'in the manufacture of common steel, particularly that for railway springs, a very large quantity of steel iron is produced from English materials,' I am led to suppose that the Russian iron has in a great degree been superseded by English improvements, as the principal sale of the steel made from the above was for coach springs. If I am right, it is a great step in advance; and certainly the imports of iron from Russia have very materially decreased of late years."

The discussion which followed elicited much useful information.

In answer to an enquiry whether Mr. SANDERSON had used peat charcoal in the manufacture of steel, that gentleman replied that he had employed peat charcoal in the manufacture of iron in the common charcoal refinery, and that he had made a ton of iron of good quality, and with less fuel than when wood charcoal was used. He intimated a very strong opinion that compressed peat may be successfully employed in the making of superior iron, and peat charcoal in the manufacture of excellent steel.

Mr. ISAAC DODDS, of Rotherham, in Yorkshire, exhibited a variety of specimens of files and rasps, all made of English iron, that had been subjected to partial steel conversion, according to the process of which his son, Mr. T. W. DODDS, was the patentee. He then proceeded briefly to explain the process by partially converting the outer surfaces of iron into steel for files or other cutting tools, or materials requiring hardness. By this means, the tenacity of the iron was combined with the superior temper and hardness of the steel. The samples produced were described as harder and more suitable for many purposes, than even the best cast-steel. Every steel manufacturer was aware that steel, in its first carbonised state, was as hard as in any other state, but that, when placed in a fire or furnace, or exposed to the atmosphere, it degenerated. It may be, therefore, easily understood that good and clean iron might make better files than cast-steel, for the points of the teeth being small, more readily part with the carbon at the points where hardness and sharpness are most requisite, as it was not the roots, but the points, of the teeth that required the temper. The specimens had been all forged in the iron state, and then subjected to the steeling or case-hardening process. They can be hardened and tempered by any ordinary smith. Even although they may have been twisted or bent in the cooling, they may be easily straightened cold by a screw press with copper rests—an operation which can be performed by women and boys. They also possess the advantage, which cannot exist in steel files, that they may be bent cold into any shape. The great question of cost was also stated to be in favour of the patent file, and the patent extends to all cutting instruments, boring tools, taps, and dies, and, indeed, to almost every purpose to which steel can be applied.

It was further announced by Mr. DODDS that the process, in conjunction with another patent, was about to be applied to the steeling of ordinary railway bars, and that the patentee intended to lay down a large quantity of them. They are tougher and more enduring than those in use; they do not laminate, and would amply repay any extra expense of steeling the working surfaces. Their adoption would, it was conceived, considerably reduce the cost of traction on railways; and the same process had been successfully tried in making springs for general purposes. The patents extend to the making of steel of every description, as was conceived, of superior quality, without manganese; the material used being simply a mixture of charcoal with some of the bi-carbonates and soda ash, and the furnaces are so constructed that they can with ease be charged and discharged. The carbonising or steeling can, by these processes, be carried to the points in the files without blistering. The patents expressly specify the case-hardening before cutting; and the process could be extended from the railway-axle to the heaviest paddle-shaft of any weight, and was not expensive. The patent was also well adapted for the piston-rods of marine and other engines, as well as for machinery in manufactories, by reason of the extraordinary toughness conferred by the patent at a trifling cost.

Mr. SELMENS stated that he had seen at the workshops of Mr. F. CRUPP, of Eisen, in Westphalia, steel applied in large bulks to the various parts of machinery, such as railway axles and railway tyres, the latter being formed of cast-steel in a very ingenious manner. A flat bar of steel was taken, two holes were bored in the ends of the bar, and by powerful machinery it was cut through from hole to hole. It was then opened out, and between rollers a perfect tyre was made, without a weld. He had seen one tyre which, after running 30,000 miles, presented scarcely any appearance of wear on its surface. Another application of steel was to railway axles and crank axles of locomotive engines, where again the metal was called upon to sustain a great amount of wear and tear. He thought in all these cases the very best metal ought to be used, which in the end would always be found cheapest, the excessive value of the steel being more than compensated by the greater load that could be put upon it, and by the much reduced wear and tear. Mr. CRUPP was known to the British public by the steel gun, and the large steel rollers for rolling mills, which were so favourably noticed at the Great Exhibition.

In reference to the same subject, Mr. DODDS stated that steered-surface tyres were patented several years ago by Mr. SYDNEY JESSOP, of Sheffield, and his plan carried internal evidence of its superiority over cast-steel tyres, because steered tyres had all the toughness of the iron, and were, consequently, more secure against accident, as the wearing parts were as deep as could be required. Mr. JESSOP's tyres had been successfully tried, and would now be, doubtless, employed, as they could be manufactured at less cost. In conclusion, Mr. DODDS remarked on the beautiful effect of this process; bars of cold-short iron had been already made into long, short, and partially fibrous iron, by regulating the carbon mixture and the heat.

A desire was strongly expressed that the means should be stated by which it could be ascertained when steel, which was known to assume in the progress of manufacture a variety of prismatic hues, from the pale straw colour to the dark blue, was of the required quality. Mr. SANDERSON accordingly explained that steel was hardened by being, when in a heated state, suddenly plunged into cold water or oil, which produced expansion; although some persons called it contraction, but it was, in fact, expansion. The steel was then too hard for any purpose. It was then put into a fire, and gently heated, and it then came to a straw colour, applicable to one purpose, or to a blue colour, applicable to another purpose; but the workman, by daily and constant practice, by observing the oxidation on the surface of the metal, knew when the coat was suffi-

ciently tempered to preserve the elasticity required for the purposes to which it was intended to apply the tool.

The meeting terminated with a vote of thanks to Mr. SANDERSON for his admirable paper, which was carried by acclamation.

At the adjourned meeting of the AGUA FRIA GOLD MINING COMPANY, held on Monday, and reported in another column, it appears that the shareholders have at length been aroused to rescue the undertaking from being wound-up. Professor ANSTED announced that the result of the week's delay had been most satisfactory, the subscriptions having increased from 7905l. to 10,560l., being 560l. above the minimum set by the directors as absolutely necessary to continue operations. At the same time, the chairman announced that it was highly desirable the full amount (15,000l.) should be raised, in order that they might have some margin to meet little delays or temporary mishaps; and we are glad to learn that additional subscriptions have since come in, making a total of upwards of 11,000l.

The directors throughout have exhibited good faith to their fellow-shareholders, as it was quite evident that if the company had been wound-up it would have been to their benefit, and it is, therefore, but fair that they should receive every support. It must be obvious, that however good any mercantile undertaking may be, nothing can be more injurious than conducting it with a limited capital, and there can be no doubt that all parties will be benefited if the maximum amount (15,000l.) is fully paid up. The advice received this week, and inserted in the usual column, show that the mines are in full operation; and it is to be hoped that both directors and shareholders may be rewarded for their perseverance.

At the time the gold mining projects were brought under public notice, on several occasions we cautioned the subscribers, and pointed out the necessity of a careful investigation into the merits of the undertakings previous to any capital being invested. In most cases our warning voice was unheeded, and the consequence has been the deplorable results that in most instances have been arrived at. It is not our intention here, *seriatim*, to follow the career of the several defunct associations, convinced, as we are, that such recapitulation would lead to no useful result. Most of the projects concocted at that period were base and delusive, and only framed for the purpose of enriching the knaves who brought them into public notice, and misleading those who, in most cases, were guided by their own duplicitous, folly, and avarice. With that class who embark in speculations to make a profit according to the turn of the market we have no sympathy; they will countenance any adventure, however specious it may be, provided that they see there is a chance of making anything out of it. Some of these associations have, however, been carried out in a most honourable manner; the directors have on all occasions shown that they have been worthy of the trust reposed in them by the proprietary, and if they have failed it has not been through lack of energy or honesty of purpose, but is mainly to be attributed to deficiency of capital and a want of proper knowledge, owing to inexperience, of the undertakings they were about to embark in. At this present period there are several companies which offer all the pretences of success, but, owing to cramped resources, are prevented from so efficiently prosecuting operations, as the value of their property merits. The directors of these associations, after carefully investigating the capabilities of their respective properties, have plainly laid before the shareholders their present position. How have the proprietary responded? On all occasions they have passed unanimous votes, authorising the directors to raise further capital, either by subscriptions or the issue of bonds, and here it would seem that the matter has rested: those who have agreed to the necessity and urgency of the case have been contented with a vote, but have refrained from advancing the necessary capital to carry that vote into effect—in fact, they may be said to have been stultifying themselves.

As men of business, they cannot expect the general public will advance money when it is seen how apathetic the proprietary themselves are. These probably will argue that they have already a large interest at stake, and do not wish further to increase it; but it must be allowed to be a singular paradox, that those who with avidity subscribed in the first instance, now that there is a likelihood of a return being made, churlishly refuse shillings to effect so desired a consummation. Not only do they risk the absolute loss of all they have embarked, but, by their backwardness, they deteriorate the market price of their shares. It is not for us to dictate to any body of men in what way they should save their property, but we do repeat it is unfair that directors should bear all the responsibility for the benefit of others: they are all interested, and it is but fair that the burthen should be equitably divided and equally shared by all parties. Had the shareholders shown half as much disinclination when they applied for their shares as they now do when requested to preserve them, many companies would not have been in existence. We have thought it necessary to draw attention to the position of these companies, which, although under different circumstances, may be classed in the same category. They have raised produce, and shown this can be done at a profit; limited means and climatic influences have retarded their development. The directors have laid their position before the shareholders; it remains now to be seen if they will support them, or allow by their inertness the property to pass away from them, and permit others to obtain the returns they have been long and anxiously working for.

PROPERTIES OF COAL—ARTIFICIAL FUEL.

BY T. H. LEIGHTON.

The qualities of coal are extremely various, at the same time that there are certain peculiar properties which may serve to divide coal into three distinct classes; namely, 1. Splint, or free-burning coal—2. Bituminous, or coking coal—3. Anthracite, or stone coal. The solid elementary portion of all these is the same, that is to say carbon, but mingled, in various proportions, with earthy or other matters. The gaseous, or volatile portions of coal, differ both in composition and proportions; in splint there are both hydrogen and oxygen, but the proportion of the latter to the former is always much less than in the composition of water. In true bituminous coal hydrogen alone is present, which is also the case with anthracite, but in the latter the proportion of gas is very small. The simple elementary gases are here only mentioned, but, of course, when these are expelled from coal by heat, they are always combined with carbon, varying in proportion according to circumstances. Its volatile constituents seem to influence the general character of coal.

The generation of steam has, at the present day, assumed a magnitude and importance which calls for the strictest investigation into the properties of coal best adapted to that particular purpose. As bituminous coal possesses the property of binding, or running together when heated, it is not adapted for use in fire-places of steam-engine boilers, since it would be required to be continually poked, to keep it sufficiently open to allow an adequate passage of air through it. As splint coal has little or none of the binding property, it is preferred on that account; but in other respects its use is objectionable. The want of this binding property occasions a great loss of fuel, by portions of unconsumed combustible matter continually passing through the fire grate; at the same time that much of this description of coal having its elements so loosely combined that, on the first application of heat, the bulk of the coal flies off with great force, carrying with it a dense volume of solid matter, in minute particles, which pass off as a cloud of black smoke. This is not only a great nuisance, but also an absolute loss of valuable fuel; besides which there is a great waste of heat, abstracted from the fire and expended in volatilising this volume of unconsumed matter, without effect in generating steam. Anthracite coal, when fully ignited, gives out a strong heat, without smoke, and is very durable; but the heat of burning anthracite is merely what may be termed local or fixed, deficient in flame, and wanting that gaseous diffused action which is so essentially necessary to promote rapid evaporation in large boilers. Anthracite, too, is also deficient in all binding or adhesive property, so that there is a great loss in unconsumed particles dropping through the fire-grate; moreover, some descriptions of anthracite, from their vitreous structure, have the property of decrepitating, shivering into small particles, when suddenly heated; thus choking up the fire, and finally dropping through the fire-grate, slightly charred on the surface. Some years since I contrived a mode of burning anthracite by the use of a blast and water grate, by means of which an extraordinary volume of flame was produced, while the grate bars were kept comparatively cool, so that the pieces of coal immediately resting upon them did not burn away, and thus formed a bed for the highly ignited fuel above, which was retained there, until all combustible matter was consumed, and thus any loss of fuel was prevented. The difficulties I experienced in my endeavours to introduce this principle, together with other more weighty considerations, determined me to attempt the formation of blocks of fuel, composed of different de-

descriptions of small coal, so as to combine all the essential requisites of a good steam fuel. I found that where a mixture of coals, a fair proportion of which being coking coal, was suddenly exposed to heat in a close vessel, it ran together into a solid block. I have since contrived a set of castings, which may easily be arranged into moulds, and can be as easily drawn apart again, to remove the blocks of fuel when formed. I determined that the best mode of heating these moulds would be upon moveable hearths; and for this purpose I contrived a furnace consisting of a long archway, to be heated by blast fires, through which these hearths, having the moulds already arranged upon them, could be passed on wheels and rails. In order that any refuse small coal might be made available for forming fuel, I contrived a method of washing coal, by forcing currents of air upwards through a bed of coal immersed in water, so as to carry off the lighter parts over plates arranged for the purpose, leaving behind the heavier portions, consisting of stones, alates, pyrites, and the larger pieces of coal. I found that when a mixture of coals, moderately moistened, was shot suddenly into a heated mould, the moisture, becoming steam, expelled all air from the interstices between the particles of coal, so that when suddenly cooled, by dashing water over it, the block became sufficiently compressed, without any mechanical application. Fuel prepared upon this principle burnt freely, without emitting any smoke; it seemed well adapted for use in the fire-places of any steam-engine boiler, whether stationary, marine, or railway locomotive. Formed into blocks, it would economise storage on ship-board; every surface being highly charred, would be a sufficient protection against the influences of weather and climate; the mode of preparation would be an ample guarantee for security against spontaneous ignition.

A lengthened and close scrutiny into the qualities and properties of coal, led me, as a natural consequence, to speculate upon the causes of such diversity; and this recalled to my recollection a circumstance which I witnessed in my early life. Being present when a considerable quantity of green vegetable matter was under treatment, one portion having been left saturated with water for several days, during sultry summer weather, upon being agitated I noticed the dense fumes of nitrous acid in great abundance. I can only account for this formation by supposing that decompositions, both of water and of vegetable matter, were going on simultaneously, the water furnishing oxygen, while the vegetable matter supplied the nitrogen, in this case fortuitously, in the requisite proportions to form nitrous acid. The train of reasoning which this circumstance induces does not merely suggest the source from whence the varieties of all the quality and properties of coal may have arisen, but it points out a mode by which coal may be formed artificially, whenever the occasion may arrive. Suppose a quantity of green vegetable matter to be left in a moistened state for a sufficient period, exposed to the temperature most favourable for promoting the decompositions alluded to, and afterwards to be subjected to the operation I have described, for forming blocks of fuel, there is every reason to believe that coal, in a state of the greatest purity, might be formed by art, in a brief space of time.

THE IRON AND METAL TRADES OF SOUTH STAFFORDSHIRE.

[FROM OUR CORRESPONDENT IN BIRMINGHAM.]

MAY 10.—The general tone of nearly all parties engaged in trade, in this district, has been rather cheerful during the past week, and hopes are entertained of a much speedier revival of trade than could have been reasonably anticipated, from the condition in which it has been during the last six months. For this favourable change of opinion we are mainly indebted to the reduction of interest by the Bank of England, more favourable advices from America, and rather reassuring accounts from the seat of war. The money market has certainly become easier; it is not so difficult to discount second class paper, and the merchants and manufacturers finding accommodation more readily afforded to them, have issued orders for goods rather freely, and given an impetus to many branches hitherto inactive.

From the iron works the reports are better; some brisk American orders are said to have been received, and the masters, on the whole, are much more confident than could have been expected from the recent returns of the Board of Trade. The falling off in the exports of iron and general hardware exhibited by these returns is certainly very great, and would seem to indicate almost an entire stoppage of the American trade. I am, however, informed that the last advices from the principal states are much more satisfactory, and promise still further improvement.

In the Copper Trade the demand is rather brisk, and prices firm, although in some branches of manufacture the hands engaged in working the article have been placed on short time.

In the Brass Cask Trade the demand is very limited, and the men are only half employed; but for military purposes there is a great consumption of brass, and many hands are busily employed in making helmets and military ornaments.

In the Tin Trade the demand is dull, but prices firm.

Electro-plating is inactive, and some of the large houses are rather making for stock than for orders.

In the Jewellery Trade increased animation is reported, but it is difficult to furnish anything like full work to the numerous hands who were induced to come to Birmingham during the Australian mania, and who, having become located here, find it difficult to remove.

The Pearl Button Trade still continues unfortunately depressed, and the unemployed hands continue burdensome to the parish.

The contributions to the Paris Exhibition are still daily being forwarded, and well calculated to sustain our national reputation. Amongst other articles announced since my last, may be noticed a variety of round and flat chains, made at the works of Mr. James Edge, to whom a prize medal was awarded in 1851 by the jury appointed to examine such articles. The chains are described as being exceedingly durable, and capable of resisting a continued or sudden strain; and means of testing their capabilities are afforded by Mr. Edge, who has provided a hydraulic machine for that purpose, upon his premises at Coalport. Messrs. W. and G. Ashford, of Kent and Essex-streets, in this town, have contributed a great variety of useful and ornamental articles, which cannot fail to command the attention of the Parisians. Amongst other articles are some elegantly finished and designed mountings for riding whips. Upon one of silver is placed a small but neatly modelled group in the round, of a French Chasseur supporting a Scotch Grey, whose horse, fully equipped, stands beside them. In alto-relievo underneath, are figures of English, French, and Turkish soldiers. An English grenadier is represented, in another group, performing a similar friendly office to a wounded Chasseur d'Afrique, who has fallen from his horse. In addition to a great variety of such articles, the firm have also sent a most elaborately finished side-saddle, with splendid trappings, bridles of great perfection in material and workmanship, and bits, of every variety in modern use, besides some novelties, one of which is most ingeniously contrived so as to serve the purpose of either a rigid mouth bit or snaffle. The stirrup, irons, and harnesses generally, are peculiar, and of the best possible description. In the glass trade, Messrs. Lloyd and Summerfield, of Birmingham, have been preparing some very splendid specimens for the Exhibition, not the least interesting in appearance of which is a very handsome case to contain their contributions. The case is entirely composed of glass, with the exception of the bottom, which is wood, covered with dark coloured velvet. The sides and top of the structure is all glass, the framework being held together by polished metal rods running through the centre of each part. In the interior are grouped together some admirable specimens of fancy glass-work; and, exclusive of the small articles, the firm have adapted glass for the purposes of furniture and upholstery. A very well executed glass cornice pole, a massive frame for a pier glass, legs for drawing and boudoir tables, and pianofortes, cannot fail to attract particular attention.

The following patents have been specified during the week, through Mr. Shaw:—Mr. Charles Hargrove, of Birmingham, has specified for improvements in annealing cast-iron, or in rendering cast-iron malleable. This invention consists, firstly, in the substitution of a series of ovens, or annealing chambers, made of fire-clay or brick, in place of the iron pans ordinarily used for containing the articles to be annealed. The inventor prefers to make the ovens, or annealing chambers, of a height equal to two or three times their width, and of a length equal to five or six times their width; but he does not confine himself to these proportions. The ovens are heated by fire-places, the heated air from which ascends on one side and descends on the other side of each chamber. The front portion of each of the ovens is open, and the articles to be annealed, and the peroxide of iron in which they are imbedded during the annealing process, are introduced at these openings; and as the chambers or ovens are filled up, the open ends are closed by a temporary wall. The invention consists, secondly, in the recovery of the iron ore, or peroxide of iron, used for annealing cast-iron. The ore, or peroxide of iron, suffers a partial reduction—that is, it loses oxygen during the annealing of the iron,

and the object is to recover the ore, or peroxide of iron, so as make it fit for use again. For this purpose the patentee treats the ore or oxide, after it has been used, by moistening it with water, and exposing it to the air; or the ore may be moistened with dilute hydrochloric, or nitric acid, and exposed to the air; or it may be treated by chlorine, or any of the compounds of chlorine, which possess oxidising properties. By any of these processes the used ore, or peroxide, may be recovered, and made fit for use again.

Mr. Edward Simons, of Birmingham, has specified his patent for a new or improved candlestick. This invention consists of a candlestick, in which the candle is forced by a spring to bear against a nozzle, so as to maintain the flame at the same height during the burning of the candle. To the candlestick the inventor attaches mechanism whereby the candle may be extinguished, or a bell rung at any desired time after the lighting of the candle. A bar, or rod of metal, at the side of the candlestick, is attached to a piece of metal fixed to the spring which forces up the candle. A cap, or extinguisher, turning upon a joint, and connected to the nozzle of the candlestick, is secured in an upright position by the end of a hook attached to the cap or extinguisher, entering an eye on the side of the candlestick. By the burning of the candle the piece of metal attached to the spring rises, carrying with it the rod or bar at the side of the candlestick. When the top of the rod or bar comes in contact with the end of the hook fixed to the cap or extinguisher, the hook is disengaged from the eye, the cap is released and forced by a spring on to the top of the candlestick, and extinguishes the candle. A graduated scale is made upon the top of the candlestick, each division representing the length of candle which will burn in an hour, or other unit of time. In order to extinguish the candle at any desired time, it is necessary to proceed as follows. After the candle is lighted the top of the rod must be adjusted by means of a thumb-screw, until it stands opposite the figure on the scale which represents the number of hours which it is wished shall elapse before the candle is extinguished. When it is wished to ring a bell instead of extinguishing the light, the extinguisher is removed and a bell substituted; a hook on the bell is engaged in the eye, and the rod adjusted as before mentioned, and when its top comes in contact with the hook, the bell is liberated and rings violently. The candlestick may thus either be used as a night-light or as an alarm.

IRON AND COAL TRADES OF YORKSHIRE AND DERBYSHIRE.

[FROM OUR CORRESPONDENT IN CHESTERFIELD.]

MAY 11.—There is a more plentiful supply of merchants' orders than for some time past, and the diminution of the make in Staffordshire, by the extinction of about one-third of the furnaces which were in blast, will, no doubt, impart increased firmness to the trade. In addition to this, the steady demand for Scotch pig-iron, which appears to continue without much intermission, has a decided tendency towards preventing a further decline in the value of iron. Scotch pig-iron has gained a good reputation abroad, from its suitability to foundry purposes; and although the production in Scotland is considerable, it does not appear to be more than readily finds a market with the adoption of railways. We are glad to find that the Welsh ironmasters have taken extensive contracts for rails, and there is little doubt that the present low figures will tempt buyers to come into the market. The ironworks in Yorkshire and Derbyshire are generally well employed, the makers of the best descriptions of iron having made no reduction in price, their iron having obtained so great a reputation for railway purposes enables them to continue actively employed. The production of plates, rails, bars, and hoops, is but little checked, and on the whole a much better state of things exists than is reported from Staffordshire.

The Sheffield trades exhibit signs of improvement, and although business is contracted, it is not so serious an extent as was apprehended.

The Coal Trade must be reported brisker than latterly, without any material alteration in value.

The general aspect of trade throughout the country has assumed a decidedly more cheerful character; and a favourable change in the weather, with refreshing showers, inspires a hope that we may have a good harvest. In a commercial point of view, too much importance cannot be attached to this question, because the high price of grain will induce shipments from all parts of the globe.

A petition is in course of presentation to Parliament from the Town Council of Sheffield, for a bill for better securing the property of iron, steel, cutlery, &c., manufacturers, against a system of embezzlement which is extensively carried on by the workmen who have materials entrusted to their care to make, not upon the premises of their masters.

There is nothing new in the lead mining district this week.

THE COAL TRADE.

The following is a statement of the delivery of coals, &c., in the port of London during the month of April:—

Ships.	Tons.	Ships.	Tons.
Newcastle	371	Blyth	9
Sunderland	163	Scotch	4
Seaham	117	Welsh	27
Hartlepool & West Hart	242	Yorkshire, &c.	34
Stockton and Middlesbrough	3	Small coal and cinders	3
Total	973		268,458

Total imported in April, 1854—coal, culm, and cinders

Inland coals by railway, canal, and common roads, entered at the coal market during the month of April, 1855

Comparative Statement of 1854 and 1855.

Imported from 1st January to 30th April, 1854—Ships

Imported from 1st January to 30th April, 1855

Decrease of ships and tons

THE RAILWAY COAL TRADE.

Monthly statement of coal and coke brought by railway and canal within the London district, during the month of April:—

Railways.	Tons cwt.	Railways.	Tons cwt.
Great Western	39,860 18	Great Western	4,270 0
North-Western	16,319 0	South-Eastern	2,011 14
Eastern Counties	11,354 0		
Total by railway in April, 1855			73,815 12

Coals by railway in April, 1854

Coals by canal in April, 1854

Comparative Statement of 1854 and 1855.

Coals by railway from 1st January to 30th April, 1854

Coals by railway from 1st January to 30th April, 1855

Decrease in the year 1855—railways

Coals by canals from 1st January to 30th April, 1854

Coals by canals from 1st January to 30th April, 1855

Decrease in the year 1855—canals

SALE OF THE NEW LINARES MINING COMPANY'S PROPERTY.—On Thursday, at Garraway's, this property, consisting of twenty-four mining sets, or pertinences, with all the machinery and plant, was brought to the hammer by Mr. T. P. Thomas. The biddings, which commenced at 1000*l.*, went on languidly, until they reached 2750*l.*, when they knocked down to Mr. Gosly, but we could not ascertain if for any particular party. The auctioneer stated that 50,000*l.* had been expended, that the works and machinery were in good condition, and that in San Roque there was a course of silver-lead ore worth 7 tons per fathom.

SALE OF MINING SHARES.—At Mr. T. P. Thomas's sale, by auction, at Garraway's, on Thursday, a large number of shares in promising mines were submitted, the majority of which found some sale purchasers. In West Alfred, 5 shares sold for 10*l.* 10*s.*; 10 for 11*l.*; 3 for 11*l.* 12*s.* 6*d.*; and 2 for 11*l.* 12*s.* 6*d.*. In Tinerfort, 130 sold for 2*l.* 10*s.*; 15 for 2*l.* 11*s.*; and 20 for 2*l.* 12*s.* 6*d.*. In Langford, 250 sold for 10*l.*; 94 for 10*s.* 6*d.*; and 35 for 11*s.* 6*d.*. In Borington 100 were withdrawn.—One Wheel Buller was bought in at 475*l.*. In Wheel Gillmar, 13 sold for 5*l.*; 5 for 5*l.* 5*s.*; and 40 were bought in at 5*l.*. In Cwm Ddaen, 300 shares were passed for want of a bidder.—1 West Selson sold for 195*l.*; 1 Wheel Reeth for 18*l.* 5*s.*; 1 in Great Wheel Alfred for 12*l.* 12*s.*; 2 for 12*l.* 12*s.*; and 5 for 12*l.* 10*s.* per share.—1 West Providence, 10*l.*; and 2 for 11*l.* 12*s.* 6*d.* per share.—Great Wheel Fortune, 25 shares, at 1*l.* 3*s.*; Wheel Norris, 30 shares, at 1*l.*; 1 Wheel Brewer, bought in at 11*l.*; 1 South Frances sold for 37*l.* 10*s.*; 1 Rosewarne, 131*l.* 10*s.*; and North Croft, 10 shares, were bought in at 12*l.*

ARGENTIFEROUS IRON.—The mining of argentiferous iron is at this time exciting considerable speculation in Spain. The concessions which are now being taken out are chiefly in the province of Guadalajara, near Navas de Jadraque. In one case a previous concession had run out, so that it is to be presumed the attempt at working was unsuccessful.

PREPARED PEAT AS A SMELTING FUEL.

We have on so many occasions called attention to the immense importance of the peat bogs of Ireland, in a social, commercial, and metallurgical view of the subject, as well as to many other extensive similar deposits in various other portions of these islands, that to repeat our remarks here would be superfluous. Notwithstanding that peat, next to wood, no doubt proved the most primitive fuel of our forefathers, and in its use probably formed a great step in advance in social progress, and that although in numerous districts here, and in continental countries, still forming a most important item in the domestic economy of the peasant, little has been done towards the improvement of its preparation, the most primitive operations still exist in practice; and while during the present century a number of scientific individuals have turned their attention to the subject, their energies have, unfortunately, taken a wrong direction, its collection and preparation remains, but in a very small degree, unimproved; and an enormously extensive field for the profitable development of engineering skill, and a staple product of national wealth, still remains open. The mass of fuel in the bogs of this kingdom is too great and too valuable to be lost, or even wasted, by rude, imperfect, and unscientific methods of obtaining a merely scanty produce from the surface, and even that but by the loss of much of its most characteristic and valuable properties; it is, therefore, highly important to all interested to know that active measures are now in progress, and with every prospect of success, for obtaining from prepared turf such results as have hitherto been considered chimerical, fallacious, and Utopian.

We have been led to these remarks by an inspection during the week of the operation of a powerful turf-pressing machine, which has been matured and constructed by Messrs. Gwynne, and is now in operation at their engineering and patent centrifugal pump works, Essex-wharf, Strand. In the course of perfecting the machinery for carrying out the inventions of Messrs. Gwynne and Company in the preparation of peat, we had occasion, at various periods during the past year and the commencement of the present, to remark at some length, and insert communications on the subject in the columns of this Journal; and as it has now become of still greater importance, from its truly successful application on a larger and, to a certain extent, practical working scale, we make no apology for again commenting upon it, being, as we believe it, capable of introducing great national benefits.

The rationale of the process of preparing turf, and rendering it a pure fuel, fit for the most delicate metallurgical operations was, under the original patent, to air-dry the turf, by which it lost 40 per cent. of its hygrometric moisture; but the patentees have since still further simplified and economised the process, by which the peat can now be taken from the bog, instantly operated on in the drying cylinders, passed to the compressing machine, and turned out a perfected fuel of great specific gravity in the form of a brick, by one continuous and rapid process. As the foreign patents are not, however, yet matured, we cannot make public this part of the arrangement, and in describing the *modus operandi*, we must on this occasion take the turf as air-dried. By means of a chain of endless buckets, commonly called a "Jacob's ladder," it is raised and poured into a hopper, placed over a series of cylinders heated by steam, from which it emerges a perfectly dry impalpable powder. The heat being properly regulated, it enters the hopper of the compressing-engine at a temperature of 180°, at which the tarry properties of the peat are just sufficiently developed to form a powerfully cementing compound, and the brick of compressed turf, when cold, is a dense and solid body, with a higher specific gravity than, and possessing all the good qualities of, coal, with none of its impurities or defects, and containing many useful properties, which the best mineral carbonaceous fuel does not possess.

The compressing machine under notice forms a brick of one pound in weight; but, although such sizes will be found useful for many purposes it is proposed in practice to employ a much more powerful apparatus, capable of compressing masses of 4 lbs. each, about the size of a common brick, and half its specific gravity. The fuel is perfectly homogeneous, withstands the abrasive and destructive operation of the blast better than coal or coke; and we believe that when properly appreciated, and brought into use, not only for metallurgical, but steam-engine, domestic, and numerous other purposes, it will be found the most effective and the most economic fuel yet known. To lead to a proper understanding of this subject, it must be borne in mind that *dry peat* is the great object sought; the large quantity of water held by it in its natural state, and its hygrometric character, or power of absorbing moisture from the atmosphere, have hitherto been the chief obstacles to successful results in its preparation. After apparently the most perfect air-drying, and feeling without moisture to the touch, peat as now prepared contains from one-fourth to one-third of its weight of water, greatly depreciating its calorific powers. By the processes patented by Messrs. Gwynne, this adulterating agent is entirely got rid of, and the really useful portion of the peat, with all its carbonaceous, bituminous, and saline properties, in a state fit for perfect combustion, is preserved intact.

In closing these remarks, we would observe that many other interesting details will be found in former Numbers of the *Mining Journal*, particularly those of December 10 and 17, 1853; January 14, an original communication and an article; and December 16 and 23, 1854; some of which relate to the Great Peat Working Company of Ireland. We have in these descriptive remarks by no means touched upon every point, but recommend all interested to inspect the machinery now exhibiting, the time required for which will be found well employed.

ACCIDENTS WITH REVOLVING PISTOLS.—The late melancholy accidents which have occurred in the Crimea through the use of Dean's and Adams's revolvers, together with one or two similar accidents last year in the Baltic, are calculated to bring revolving arms into some disrepute. The death of Dr. Gavin by the hand of his brother, and the injury inflicted upon himself by Captain Donovan, of the 33rd regiment, have been made public through the columns of the *Times* newspaper. It is, however, but fair to state that such accidents are impossible with Colt's pistols, to which we have always given a preference in every particular. Moreover, when we have seen superiorly asserted and claimed by those who have borrowed so much from Col. Colt's invention, we have uniformly maintained the superior merits of the real and genuine revolver. It is impossible to discharge a Colt's pistol by mere concussion, or by stumbling, or by being stumbled against, as in Captain Donovan's case. Nor, as in the other unfortunate affair to which we have alluded, which deprived one brother of life and another temporarily of reason, will accidental pressure by the finger, without cocking, discharge it. It can be cocked and fired rapidly enough for any purpose with one hand, and whilst it carries much further, is infinitely safer than any other pistol. The other charges are never displaced by the firing of one owing to the form of the lever ramrod; and such is its hermetical security when loaded that a Colt's pistol may be left under a running stream, and discharged a month after, without a single chamber hanging fire.

CAUSE OF THE FAILURES OF LANCASTER'S GUN.—The cause of the disastrous failures of the two grooved rifle cannon, commonly called Lancaster's, arose, not from any defect in the gun, but from the form of the shot and shell, which is conical or conoidal, like a boy's peg top; the proper form should be cylindrical. The cylindrical body of the missile should be at least an eighth longer in its diameter of the bore of the gun; this will prevent the shot from tripping in its passage through the barrel. It was this tripping, acting like a wedge or lever, so frequently burst the Lancaster guns. The form of my shot and shells for rifle cannon and rifle small arms has been, ever since the year 1823, cylindrical-conoidal. Such were the missiles that I successfully used from my rifle iron one-pounder, which was cast at Cork, nearly two years ago, with the rifles ready formed in the casting; it had four grooves, and might be called a double elliptic bore gun; I sent it, with a few of its projectiles, to the Turkish Ministry of War at Constantinople, in charge of Captain Kilcock, commanding the *Himalaya* at the time the 33rd Dragoon Guards embarked on board that vessel for the seat of war. Figures 12 and 23, pp. 6 and 7, in my pamphlet on Projectiles, and p. 245 in the *Practical Mechanic's Journal* for Dec. 1853, show the form of the shot and expanding sabot.—J. NORRIS, May 11.

NOVEL CONSTRUCTION OF STEAM SCREW COLLIERIES.—The Eastern Archipelago Company have commenced the formation of a fleet of coal vessels, of novel construction, for the transport of the produce of their coal fields in Borneo and Labuan, where their concession from the Sultan extends over a length of 150 miles. Messrs. W. and C. Miller and Sons, on Saturday last, launched from Toxteth Dock, Liverpool, the first vessel completed, of 600 tons, and has neither floors, frames, nor ribs. The iron plates forming the hull are carried completely round for hands, in manner as they are in an egg-shaped boiler, openings being left on deck for handways, &c., and the bulkheads are divided by similar sheet-iron, forming powerful stays. The difficulties hitherto met with in the adaptation of the wood parts of iron vessels, such as the floors and decks, are thus obviated, and this vessel is expected to prove singularly water-tight. We understand the company have obtained a concession of a railway, to form a colony, and send out a chaplain. Coal stations will be immediately formed, and will be of great importance to the steam navigation between Europe and Australia, China, and the East Indies.

WHITE LEAD OBTAINED BY PRECIPITATION.—Mr. Richard Baker, of Newark, New Jersey, has patented an improved method of producing the white carbonate of lead of commerce, consisting of a combined arrangement of apparatus, constructed so as to produce the carbonate by precipitation, more expeditiously and economically than by the usual methods. The apparatus consists in connecting with an air-pump a series of a great number of distribution pipes, descending vertically from a main horizontal tube, and passing down through the head of every square foot of set into a solution of sub-acetate of lead, one pipe at least for every square foot of surface of the top of the vessel, thereby traversing the solution with a great number of small jets of carbonic acid gas, causing a rapid decomposition of the sub-acetate solution, and a deposition of carbonate of lead, and as the vertical tubes cannot shut up with the ponderous precipitate, a constant blast is secured.

ALCOHOL FROM COAL (QY, THE TORBANE HILL MINERAL?)—A young French chemist, of the name of Berthelot, has made a remarkable discovery—the alcohol can be procured directly from olefiant gas, which can be extracted in large quantities from coal. The social effects of this discovery it is impossible to estimate.

PEDN-AN-DREA AND WHEAL SPARNON MINE.—Whereas, certain persons in London and in Redruth have published statements that the PEDN-AN-DREA AND WHEAL SPARNON UNITED MINE, situate near Redruth, in the county of Cornwall, is divided into 10,000 shares, and have offered a certain number of such shares for sale, and whereas, the said persons have also published statements that the said mine is divided into 50,000 shares, and that by the agreement between the promoters of the mine the said Francis Bottrill is the holder of 2000 of such 50,000 shares, and that his said shares are free to the extent of £1 per share. And notice is further given, that the said Francis Bottrill has never consented to any re-constitution of the mine, and insists upon retaining his 2000 (50,000th) shares free, as aforesaid.

Truro, May 8, 1855. J. G. CHILCOTT, Solicitor for the said Francis Bottrill.

CLEW BAY COPPER AND SULPHUR MINING COMPANY.—Shareholders in this company, entitled to PARTICIPATE in the DIVISION of FORFEITED SHARES, are requested to APPLY for their proportion on or before MONDAY NEXT, or their claims will not be admitted.

By order of the Committee of Management, J. MAY, Sec.

MIZEN HEAD COPPER MINING COMPANY.—NOTICE.—The shareholders in this company are requested to take notice, that unless the CALLS DUE on their SHARES since the 15th July, 1854, be PAID before One o'clock on the 14th inst., the FORFEITURE of such SHARES will then be confirmed. It being necessary to provide without delay for the liquidation of the debts due by the company, and for carrying on the undertaking, the time cannot be further extended.

JOHN MADDEN, Sec.

Offices, 1, Bishopsgate-street Within, London, May, 1855.

The committee of shareholders appointed on the 15th February last are anxious that their co-shareholders should avail themselves of this, the last opportunity, of paying up, and thus release the mine from its liabilities.

Should those in arrear not pay a sufficient sum to clear off the liabilities, a call must be made for this purpose on all those who have already paid up in full, in order to save the property. Should this call not be responded to, the only alternative will be to sell the lease.

TIMMORRE MINING COMPANY.—Notice is hereby given, that at a SPECIAL GENERAL MEETING, held on April 25th last, it was resolved that the shareholders be called upon to contribute 1s. per share for the necessary expenses of the mine, on or before the 9th day of June next, and further that the sum so contributed be not appropriated for any purpose until sanctioned by a general meeting.

Pursuant to the above, ALL SHAREHOLDERS, registered or non-registered, are hereby called upon to PAY to the secretary, at the office of the company, the sum of ONE SHILLING on every share held by them, on or before the 9th day of June next.

Special attention is also directed to the 6th rule of the company, under which, in the event of the shareholders failing so to contribute, the directors will be authorised in disposing of the mine by sale, for the benefit of the adventurers.

N.B. The numbers of all shares upon which the call is to be paid must be forwarded at the time of payment; but should it be determined by the next general meeting to return the money so paid, the shares must be produced.

By order, HENRY C. CROFT, Sec. and Purser.

21, King-street, St. James's, May 1, 1855.

START BAY SLATE QUARRY COMPANY.—Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the shareholders of this company will be HELD at the offices of Messrs. Lumley and Lumley, solicitors, 41, Ludgate-street, London, on Thursday, the 31st day of May inst., at One o'clock p.m., precisely, for the purpose of dissolving the company, under the provisions of the 19th Rule of the Cost-book of the company, and of passing such resolutions thereon as the meeting may deem advisable; and also of agreeing to or confirming the resolutions passed for the same purpose at the meeting held on the 9th inst.

By order of the Committee, LUMLEY AND LUMLEY.

41, Ludgate-street, London, May 10, 1855.

EAST WHEAL ROBERT, IN THE PARISH OF SAMPFORD SPINNEY, IN THE COUNTY OF DEVON.—0000 shares.

On the "Cost-Book System."—Held on lease for 21 years, at 1-15th dues.

PROSPECTUS.

This mine, as will be observed by the accompanying reports of well-known agents, contains the now celebrated Sorridge and North Wheal Robert lodes; and, from the samples of the ores which have been taken from the shodding-pits, where the backs of the lodes have been already opened, there exist the same favourable indications of valuable courses of ore, at very shallow levels, as were evidenced in the Sorridge and North Wheal Robert sets.

The East Wheal Robert is, therefore, undoubtedly entitled to such reflective value as must now be attached to sets in this district which possess the lodes of the above-named important mining properties; whilst it has, in addition, certain most favourable features, which are peculiarly its own.

The special features which give increased and undeniable value to the East Wheal Robert are to be found in its location, and the peculiarities of its surface, which afford the most important facilities for working the mine, at a very trifling cost.

The East Wheal Robert is bounded on the south by the River Walkham, from the margin of which a deep adit is now commenced, which will intersect all the lodes in the estate, at a depth of from 50 to 60 fathoms. This affords facilities for working all the lodes to that depth, without the necessity of sinking engine-shafts, or erecting costly pumping machinery, whilst the never-failing supply of water which the River Walkham affords is available, and fully sufficient for all the requirements of sinking below adit, in the prosecution of the deeper levels.

It will be observable, by the reports, that the operations on the mine are considerably facilitated by the adit being driven on a cross-course. The ground of this cross-course is easy, and the walls firm, whilst its composition affords evidence of the nature of the lodes approached by the driving; in the present end strong indications are given that one of the lodes will be shortly intersected, the cross-course carrying rich stones of mundie, with grey and yellow copper ore. It is assumed, therefore, that the known richness of the lodes, and the small outlay which can reasonably be anticipated, will combine to render the East Wheal Robert a most eligible property for the investment of capital.

REPORTS UPON EAST WHEAL ROBERT.

Wheal Wilhams, March 24.—East Wheal Robert is situated in the parish of Sampford Spiney, in the county of Devon, about four miles south of the town of Tavistock, and is bounded on the east by, and within about 300 fathoms from, the great granite range of Dartmoor, and on the west by the high-road leading from Hockworthy bridge to the town of Tavistock. The stratum is of a light kilas, and very congenial for the production of valuable copper ores. The set is very extensive, and embraces within its limits all the lodes from east to west of the Sorridge Consols and North Wheal Robert, besides many others not in connection therewith, accompanied with a large elvan-course. It also contains two large cross-courses, of great promise, running north and south, and intersecting all the lodes, which add much to the prospective value of this mining property. Without the least hesitation, I do pronounce this mine to be a valuable piece of mineral property, and if properly developed, will soon stand high on the list with those dividend-paying mines in the district of Tavistock.

GEORGE ROWE.

Sir,—I have, agreeably to request, inspected East Wheal Robert, and have to notice that the set is extensive, and advantageously situated, having just claims for a spirited outlay to be made for its development, and deserving a trial to be made on the several mineral lodes contained therein. The set is surrounded by the several productive and promising mines of North Wheal Robert, Sorridge Consols, Great Sorridge, and Hockworthy Mines, and also contains the lodes of the North Robert and Sorridge Consols, as well as other lodes and cross-courses; its extent is upwards of 500 fms. from east to west, by 400 fms. from north to south. A large portion of the set has a beautiful stratum of kilas, or clay-slate, congenial for the produce of copper, and is traversed by two or three large cross-courses, one of them known as the Great Wheal Friendship cross-course. Recently three promising lodes have been opened on near the surface, producing fine stones, with veins of copper ore; and, no doubt, there are several other lodes to be yet discovered in the northern portion of the set, which can be advantageously reached by a cross-adit, driven on one of the cross-courses from the Walkham River, which bounds the set on the south; the depth of adit in reaching the lodes will be from 35 to 70 fms. before the summit of the elevated ground is reached; this is a circumstance of importance, and the great advantage to be derived from water-power from the permanent River Walkham is of still far greater importance, as sufficient water may be diverted therefrom to work the necessary machinery for all the required purposes of mining to a depth of 100 fms. During the past six months I have paid frequent visits to this set and its locality, inspecting the various lodes and strata; and I can confidently recommend the East Wheal Robert set as a very deserving speculation, and fully believe that capital applied to the prosecution and development of the several lodes will be repaid by returns of profit, and the speculator therein will realise fair profits from capital judiciously applied thereto.

JONATHAN DAVIS,

Mine Agent and Surveyor, Gunnis Lake, Calstock.

Tamar Maria, March 30.—Agreeably with your request, I have surveyed East Wh. Robert, which is situate in the parish of Sampford Spiney, in the county of Devon. I have to notice first, that the set is very extensive, and very advantageously situated, being surrounded by several productive and promising mines, viz. North Wheal Robert and Sorridge Consols. This set extends upwards of 500 fms. in length, and above 400 fms. in width. Three lodes have already been laid open, showing a very promising appearance, carrying some beautiful stones, with veins of copper ore. There are two or three cross-courses traversing this set, and form intersections with the east and west lodes; these intersections are generally known to improve the east and west lodes. The stratum is of a beautiful character, being a light blue clay-slate. There are great advantages connected with the working of this mine, having the Walkham River running through the set, which can be made available for all purposes of pumping, stamping, crushing, &c. (say) to a depth of 100 fathoms. Adit levels can be driven at a depth of from 30 to 50 fms. into the high hills. An adit has already been driven a considerable distance towards the southernmost lode, and can be extended to the other lodes at no very great expense, of great importance. I have several times visited this locality, and have a good opinion of it for a great distance around; I might mention Great and East Sorridge, Sorridge Consols, and Wheal Robert, all of which are producing, or are on the eve of doing so. I do not hesitate to say I have also a good opinion of East Wheal Robert, and with judicious management, I have no doubt it will prove to be a productive mining property. I would recommend your at once going to work spiritedly, and lay open the different lodes; by doing this you will be able to select the most proper places for a permanent operation.

JOSEPH HODGE.

Wheal Wilhams, March 30.—I find East Wheal Robert to be very extensive on the run of the lodes east and west, and north to south. It has the North Wheal Robert to the west, and lies within 600 fms. from the granite range of Dartmoor to the east. The stratum is of a light blue kilas, most congenial for the production of valuable copper lodes in that district. It has within its compass all the lodes passing from east to west of Sorridge Consols and North Wheal Robert, besides several others running parallel to the south, not in connection with the former mines, accompanied with an elvan course, which is a very important feature, and adds greatly to the value of this property. There are two cross-courses traversing this set from north to south; the one is supposed to be that passing through the Devon Burra Burra, from whence large rocks of copper ore have been taken. An adit level can be taken upon this cross-course, which will intersect all the lodes, and at a depth of 50 fms. from surface. The River Walkham can be made available for such machinery as may be required for the future developing the lodes and dressing purposes. Judging from the locality, and the advantages which the property contains, it warrants the greatest attention, and by proper management, and especially developing the mine, it will speak for itself mining world by its productiveness.

H. RICKARD.

BRITANNIA MINE, NORTH MOLTON, DEVON.—TO MINING COMPANIES AND OTHERS.—Notice is hereby given, that the WHOLE of the excellent PLANT and MACHINERY, now on the above MINE, will be SOLD, BY AUCTION, on Thursday, the 17th May inst., at One o'clock precisely, upon the premises. The list comprises a NEW WATER-WHEEL, 50 ft. diameter, and 5 ft. breast; 100 ft. of connecting rods; balance-bob 20 fms. shaft rods, with strapping plates; 28 fms. of 9 in. pumps; windbox, working-barrel, and doopries; also, a water-wheel, 25 ft. diameter; capstan, shears, and rope; a 6-head iron stamping mill; ladders. Superior CRUSHING and AMALGAMATING MACHINERY (designed by Mr. John Mitchell, and constructed under the superintendence of Captain Moorson), comprising edge runners, working in iron pans; revolving barrels; and a quantity of shafting, gearing, driving bands, &c.; together with blacksmiths' shop, fittings, and tools, and numerous mining implements and materials.

May be viewed by application to Capt. THOMAS, on the premises; and further particulars to the secretary, at the offices of the company; and of Mr. F. Dossa, auctioneer, North Molton, Devon.

By order, P. F. NURSEY, Sec. and Purser.

16, Barge-yard Chambers, Bucklersbury, London, May 4, 1855.

EAST CROWDALE AND RIX HILL MINES (TAVISTOCK).—THE MATERIALS of these MINES will be SOLD, BY AUCTION, on Tuesday, the 22d May, at One o'clock. They comprise a 56 in. STEAM-ENGINE, and 10 tons boiler, with side tube, which cost £1800; a 36 in. PUMPING, HAULING, and STAMPING ENGINE, with boiler and massive fly-wheel, hauling gear, &c.; 15 ft. 6 in. 24 in. iron shafts; 4 ft. 3 in. 11 in. wood matching; windlasses; wheelbarrows; carpenters' smiths' and miners' chests; several fathoms 7-16 in. chain; double block; pair bevels; 36 in. smiths' bellows; anvil; vice; smiths and miners' tools; 1 large beam; beam and scales; weights; screw stock; taps and plates; bolts and nuts; rod pins; wrought and cast-iron; lot new Norway balk; lot old timber; lot plank; whin and other ropes; carpenters' bench; water-barrel; saw-pit; doors and windows; powder; hilts; nails, &c.; together with the ACCOUNT-HOUSE FURNITURE, comprising an excellent apparatus, 2 kitchen tables, 6 chairs, bedstead and bedding, form, knives and forks, glasses, earthenware, saucepans, tea kettle, window blinds, and sundry other articles.

The materials are in excellent condition, the whole being nearly new; the auctioneer would recommend them to all purchasers. For viewing the same, application to be made to Capt. JOHN BUCKAN, Helston; or on the mine.

Mr. Greenwood having been appointed to sell the materials and wind-up the concern, all persons having any claims on the mine will forward the same to him, for the purpose of such claims being paid.—Truro, April 27, 1855.

VERY IMPORTANT AND EXTENSIVE SALE.

TO RAILWAY CONTRACTORS, AND MANUFACTURERS OF WOOD KEYS AND TRENNALS FOR RAILS AND CHAIRS AND SHIPBUILDING, ENGINEERS, IRONFOUNDERS, BOILER MAKERS, AND OTHERS.

MR. SAMUEL BLOORE, Junr., has received instructions from the proprietor (in consequence of the room being required for extending his railway plant and wagon works) to SELL, BY AUCTION, without reserve, on Monday, the 21st day of May, and following days, at the VULCAN IRONFOUNDRY, ENGINEERING, and BOILER WORKS, BIRMINGHAM, a very complete and valuable SET of MACHINERY for MAKING the WOOD KEYS and TRENNALS for RAILWAYS and SHIPBUILDING, including circular saw tables; valuable shaping machine for working the same; by Mr. Nathan Gough; one powerful lever punching machine, with tools, will punch 1 in. holes in $\frac{3}{4}$ in. plate; a valuable vertical punching and shearing machine, new, will punch 1 in. holes in $\frac{3}{4}$ in. plate; a second-hand ditto; an excellent plate bending machine; eight valuable new and second-hand steam-engines, varying from 2 to 50-horse power; a great number of sets of patterns for beam, direct-acting, and horizontal steam-engines; also, a large quantity of valuable machine patterns, cranes, spur and bevel wheels, saw mills, sugar mills, water-wheels, and strap and rope pulleys, and weighing machines; 30 valuable and most complete self-acting screw-cutting and other lathes, with centres from 6 in. to 33 in. high; planing, slotting, shaping, drilling, screwing, and other machines; two wharf cranes; six crab cranes; three circular saw benches; valuable morticing and tenoning machines, and boring machines; 100,000 new bricks; 10,000 ft. seasoned pine and other boards and planks; register and oven grates; steam stoves, ash grates, and furnaces; ash weights; boiler doors and frames; boiler carriage; timber carriage; carts; implements; and an infinity of other useful property.

For further particulars, see catalogues, which will be ready in a few days.

IMPORTANT AND UNRESERVED SALE BY AUCTION, AT THE BEDLINGTON IRONWORKS, NORTHUMBERLAND.

TWO LOCOMOTIVE ENGINES, 45-horse high-pressure engine, two tubular boilers; self-acting lathes and shafting; planing, drilling, screwing, and punching machines; patent steam hammer; four second-hand boilers; ironstone, chalk, and hematite; pig-iron, refined metal, and merchant bars; scrap iron and metal; spur-wheels, sheaves, pinions; new and old brass castings, copper, and lead; boiler plate, new and old rails and tram plates; haystack boiler; wagons for coal, iron, slag, locomotives, and agricultural purposes; three keels; weighing machines, &c.; block cranes and blocks; crab-winch, screw-jacks, anvils, vices, bellows, smiths and joiners' tools; smiths' ironwork; utensils and implements for rolling-mills, fitting-shops, blast-furnaces, and iron mines; new and old wood for rolling-mills, fitting-shops, and iron mines; 300 tons of pig-iron; 70 tons of refined metal; 30 tons of cast iron; 30 tons of ironstone; 30 tons of metal; 30 tons of brass castings, copper, and lead; new and old boiler plates, Railway bars, and tram plates; incline, crane, sling, and other chains; new and second-hand wagons for coal, iron, slag, locomotives, and agricultural purposes; scales, weights, steel yards, and patent weighing machines; block cranes and blocks; crab-winch, vices, screw-jacks, anvils, slake troughs, fender springs, vices, bellows, smiths and joiners' tools; smiths' ironwork, crank axles, railway wheels and axles; utensils, tools, and implements for rolling-mills, fitting-shops, blast-furnaces, and iron mines; new and old wood for rolling-mills, fitting-shops, and iron mines; 300 tons of pig-iron; 70 tons of refined metal; 30 tons of cast iron; 30 tons of ironstone; 30 tons of metal; 30 tons of brass castings, copper, and lead; new and old boiler plates, Railway bars, and tram plates; incline, crane, sling, and other chains; new and second-hand wagons for coal, iron, slag, locomotives, and agricultural purposes; scales, weights, steel yards, and patent weighing machines; block cranes and blocks; crab-winch, vices, screw-jacks, anvils, slake troughs, fender springs, vices, bellows, smiths and joiners' tools; 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THE MINING SHARE LIST.

Shares.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
8129	Alfred Consois (copper), Phillack	£115.10d.	£109	9 1/2 10 1/2	£15 5 0	0 10-April, 1853.
8000	Alfred Consois (copper), Phillack	7	1 1/2	1 1/2	0 10	0 10-Nov., 1853.
1324	Bailowwiden (tin), St. Just	11 1/2	6	12 5 0	0 10	0 10-Jan., 1854.
5000	Bat Hole, Worthen, Salop	11.17s. 6d.	10 1/2	10 1/2	0 10	0 10-April, 1853.
4000	Bedford United (copper), Tavistock	22.6s. 8d.	9 1/2	10 1/2	0 10	0 10-Feb., 1853.
5000	Black Craig (lead), Kirkcubrightshire	5	5	5	0 10	0 10-April, 1853.
200	Botalack (tin, copper), St. Just	91 1/2	230	330 5 0	0 10	0 10-June, 1851.
1000	Bryntali, Llanidloes, Montgomeryshire	7	1	220 10 0	0 10	0 10-April, 1854.
1000	Carn Brea (copper, tin), Illogan	15	85	0 2 0	0 10	0 10-Feb., 1853.
10000	Castle State Quarry, Dolwyddelan	1	1 1/2	0 10	0 10	0 10-June, 1850.
250	Comford (copper), Gwynnapp, Cornwall	75	8 1/2	55 0 0	0 10	0 10-Jan., 1853.
250	Comharrow (copper, tin), Camborne	20	185	45 0 0	0 10	0 10-March, 1855.
128	Cornwall (lead), Cardiganshire	60	365	445 0 0	12 0	0 10-May, 1853.
1024	Devon Great Consols (copper), Tavistock	1	365	0 10	0 10	0 10-Nov., 1853.
1200	Diurode (copper), Ireland	20 1/2	77 1/2	875 4 0	0 10	0 10-Feb., 1854.
12000	Drake Wale (tin, copper), Calstock	11.9s.	1 1/2	0 6 0	0 10	0 10-April, 1853.
300	East Darren (lead), Cardiganshire	32	80	0 10	0 10	0 10-Nov., 1854.
128	East Pool (tin, copper), Pool, Illogan	24 1/2	100	258 0 0	0 10	0 10-April, 1854.
1024	East Wheel Margaret (tin, copper)	5 1/2	12	5 3 4	0 10	0 10-May, 1855.
1200	Eyam Mining Company, Derbyshire	3 1/2	28	390 15 0	10 0	0 10-Aug., 1850.
494	Fowey Consols (copper), Tywardreath	40	30	41 7 3	1 0	0 10-April, 1855.
2240	Foxdale, Isle of Man	71.10s. 6d.	25	3 2 4	0 10	0 10-April, 1855.
320	Ditto (New Shares of 25s. each)	25	25	1 0 0	0 10	0 10-June, 1853.
4448	General Mining Co. for Ireland (cop., lead)	2 1/2	2 1/2	23 0 0	0 10	0 10-Sept., 1850.
5000	Goginan (lead), Cardiganshire, Wales	18 1/2	17	0 10	0 10	0 10-Dec., 1852.
1024	Gonemena (copper), St. Cleer	18 1/2	1	0 10	0 10	0 10-Sept., 1854.
50000	Great Consols (copper), St. Austell	4 1/2	1	0 10	0 10	0 10-Nov., 1854.
13750	Great Polgoth (tin), St. Austell	100	200	181 10 0	0 10	0 10-Nov., 1854.
110	Great Tor (tin), Gwynnapp	100	200	2 12 6	0 10	0 10-April, 1854.
1024	Herodfoot (lead, near Liskeard)	8 1/2	2	25 0 0	0 10	0 10-March, 1855.
6000	Hingham Down Consols (copper), Calstock	3 1/2	11	25 0 0	0 10	0 10-Feb., 1854.
1000	Holmbush (lead, copper), Callington	25	—	3 5 0	0 10	0 10-Sept., 1852.
2000	Holyford (copper), near Tipperary	11	—	380 0 0	0 10	0 10-March, 1851.
76	Jamata (lead), Mold, Flintshire	31.13s. 6d.	—	0 4 0	0 10	0 10-March, 1851.
2048	Kennedy (copper), Breage	6s. 7d.	1 1/2	1 15 0	0 10	0 10-May, 1854.
786	Kirkcubrightshire (lead), Kirkcubright	9 1/2	—	0 10	0 10	0 10-July, 1853.
50000	Lackamore (copper), Tipperary, Ireland	1	—	1800 0 0	0 10	0 10-Feb., 1855.
20	Laxey Mining Company, Isle of Man	100	1000	0 2 0	0 10	0 10-Aug., 1851.
5000	Lewis (tin, copper), St. Erth	3 1/2	100	1044 0 0	0 10	0 10-Feb., 1855.
160	Levant (copper, tin), St. Just	2 1/2	195	218 15 0	0 10	0 10-Dec., 1854.
400	Leuburne (lead), Cardiganshire, Wales	18 1/2	29	2 10 0	0 10	0 10-Dec., 1854.
320	Machno Mine and Slab Company	25	22 1/2	1 17 6	0 10	0 10-Dec., 1854.
160	Ditto (New Shares)	160	22 1/2	0 2 0	0 10	0 10-Dec., 1854.
6000	Marke Valley (copper), Cardigan	4.10s. 6d.	2 1/2	1 11 0	0 10	0 10-June, 1855.
5000	Mendip Hills (lead), Somerset	3 1/2	2 1/2	10 6 6	0 10	0 10-June, 1855.
5000	Merlin (lead), Flint	2 1/2	15 1/2	0 1 6	0 10	0 10-April, 1855.
50000	Mining Co. of Ireland (copper, lead, coal)	7	15 1/2	0 1 6	0 10	0 10-April, 1855.
5000	Nantow and Penrhyn	1 1/2	1 1/2	0 3 9	0 10	0 10-Nov., 1854.
5000	Nantlle Vale (slate), Llanidloes	1	1 1/2	41 0 0	0 10	0 10-Jan., 1855.
470	Newtons Mining Company, Co. Down	50	65	324 0 0	0 10	0 10-Dec., 1854.
200	North Pool (copper, tin), Pool	22 1/2	100	249 10 0	0 10	0 10-Sept., 1853.
1000	North Roseker (copper), Camborne	22 1/2	21 22	4 0 0	0 10	0 10-March, 1853.
6000	North Wheel Bassett (copper, tin), Illogan	11 1/2	12	23 5 0	0 10	0 10-July, 1853.
6400	Par Consols (copper), St. Blazey	1 1/2	8 1/2	0 10	0 10	0 10-Oct., 1854.
500	Peark United (copper), North Derbyshire	7 1/2	15	1 15 0	0 10	0 10-June, 1851.
1160	Penn St. George (cop., tin), Perranabuloe	21 1/2	15	50 0 0	0 10	0 10-Nov., 1853.
200	Phoenix (copper, tin), Llanidloes	30	300	6 6 0	0 10	0 10-Sept., 1854.
1000	Poiborro (tin), St. Agnes (Preferential)	15	—	24 4 0	0 10	0 10-Feb., 1855.
580	Providence Mines (tin), Uny Lelant	20 1/2	21	0 8 0	0 10	0 10-Jan., 1853.
1948	Rix Hill (tin), Tavistock	3 1/2	160	0 8 0	0 10	0 10-March, 1853.
250	Rosewarne United (copper, tin), Gwynnapp	24	315 320	358 0 0	0 10	0 10-March, 1855.
250	South Tamar (copper), St. Cleer	2 1/2	320	2 5 0	0 10	0 10-April, 1855.
6000	South Tamar (silver-lead), Beerferris	11.6s. 6d.	90	60 0 0	0 10	0 10-May, 1855.
250	South Tamar (copper), Redruth, Cornwall	4 1/2	400	288 5 0	0 10	0 10-May, 1855.
248	South Wheel Frances (copper), Illogan	37 1/2	2 1/2	0 17 6	0 10	0 10-April, 1852.
1024	Shearwater Consols (tin), St. Just, Cornwall	1 1/2	2 1/2	885 0 0	0 10	0 10-Feb., 1854.
1024	St. Aubyn and Grylls (copper, tin), Breage	80	100	11 10 0	0 10	0 10-Oct., 1850.
94	St. Ives Consols (tin), St. Ives	80	100	4 11 0	0 10	0 10-Feb., 1853.
1000	Stray Park and Camborne Vein (copper)	10 1/2	5 1/2	6 18 6	0 10	0 10-Feb., 1853.
9000	Tamar Consols (silver-lead), Beerferris	4 1/2	2 1/2	7 16 3	0 10	0 10-Feb., 1853.
9000	Tincoff (copper, tin), near Pool, Illogan	7 1/2	4 1/2	1 3 0	0 10	0 10-Oct., 1854.
2048	Trehan (silver-lead), Menheniot	6 1/2	4 1/2	467 15 0	0 10	0 10-Jan., 1853.
2500	Trevelagh Consols (copper), Redruth	11 1/2	24	103 13 6	0 10	0 10-April, 1851.
572	Trevelagh Consols (tin), St. Ives	32 1/2	150	0 10	0 10	0 10-Feb., 1855.
96	Trevelagh Consols (copper), Gwynnapp, Cornwall	10 1/2	—	805 10 0	0 10	0 10-March, 1854.
120	Trevelagh Consols (copper), Gwynnapp, Cornwall	10 1/2	—	0 10	0 10	0 10-June, 1854.
9000	Trevelagh Consols (copper), Gwynnapp, Cornwall	10 1/2	—	55 0 0	0 10	0 10-Dec., 1851.
4006	Trevelagh Consols (copper), Menheniot, Cornwall	2 1/2	—	47 5 0	0 10	0 10-Feb., 1854.
100	Trumpet Consols (tin), near Helston	95	210	2 5 0	0 10	0 10-Jan., 1855.
400	United Mines (copper), Gwynnapp	40	—	0 15 0	0 10	0 10-Jan., 1855.
1024	Wellington (copper, tin), Perranabuloe	8 1/2	10	0 11 0	0 10	0 10-July, 1853.
7500	Welsh Potash (silver-lead), Talybont, Card.	5	—	0 11 0	0 10	0 10-March, 1855.
2500	Ditto	1 1/2	29 1/2	265 5 0	0 10	0 10-Feb., 1855.
6000	West Bassett (copper), Illogan	20	175	10 0 0	0 10	0 10-March, 1855.
5000	West Fowey (copper), Gwynnapp	210 7	130	135 15 0	0 10	0 10-Nov., 1854.
1024	West Providence (tin), St. Erth	5	14	25 0 0	0 10	0 10-April, 1853.
900	West Wheel Seton (copper), Camborne	77	210	5 0 0	0 10	0 10-April, 1853.
1228	Wheel Arthur (copper), Calstock	10 1/2	550	642 10 0	0 10	0 10-March, 1855.
250	Wheel Bassett (copper), Illogan	10 1/2	490	631 5 0	0 10	0 10-Feb., 1853.
250	Wheel Buller (copper), Redruth	13 1/2	15	6 10 0	0 10	0 10-April, 1853.
1024	Wheel Charlotte, Perranabuloe	3 1/2	210	6 1 6	0 10	0 10-Dec., 1854.
250	Wheel Clifford (copper), Gwynnapp	210	5 1/2	3375 10 0	0 10	0 10-May, 1854.
5700	Wheel Exmouth and Adams United	4.14s.	115	1 5 0	0 10	0 10-Sept., 1852.
128	Wheel Friendship (copper), Devon	1 1/2	—	4 10 0	0 10	0 10-May, 1853.
5000	Wheel Golden (sl.-lead), Perranabuloe	1 1/2	—	80 0 0	0 10	0 10-Aug., 1854.
6000	Wheel James (iron, copper), Roche	11.4s.	7	220 0 0	0 10	0 10-May, 1854.
512	Wheel Jane (silver-lead), Kea	8 1/2	50	23 15 0	0 10	0 10-March, 1854.
400	Wheel Loe (tin), Wendron	79	100	167 3 0	0 10	0 10-Feb., 1855.
112	Wheel Margaret (tin), Uny Lelant	3 1/2	32 1/2	40 10 0	0 10	0 10-Sept., 1852.
512	Wheel Mary Ann (lead), Menheniot	70	400	254 10 0	0 10	0 10-Jan., 1855.
80	Wheel Owele, St. Just, Cornwall	70	20	47 10 0	0 10	0 10-Jan., 1855.
240	Wheel Reeth (tin), Uny Lelant	24 1/2	238	21 2 6	0 10	0 10-July, 1855.
198	Wheel Seton (tin, copper), Camborne	107	32	20 3 0	0 10	0 10-July, 1855.
5000	Wheel Trevelagh (silver-lead), Liskeard	4 1/2	4 1/2	10 2 6	0 10	0 10-July, 1855.
1024	Wheel Trevelagh (tin, copper), Gwynnapp	17.9s.	38 1/2	0 3 0	0 10	0 10-Aug., 1854.
4006	Wheel Wrey (lead), St. Ives	38 1/2	1 1/2	0 3 0	0 10	0 10-Aug., 1854.
5000	Wicklow (copper), Wicklow	1	1 1/2	0 3 0	0 10	0 10-Aug., 1854.
10000	Wrygan (slate), Festing	1	—	0 3 0	0 10	0 10-Aug., 1854.

FOREIGN MINES.

Shares.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
73000	Alten Mining Company (copper), Norway	£14 1/2	—	4 5 0	0 15	0 15-Nov., 1853.
10000	Baden, Grand Duchy of	1 1/2	—	0 10	0 10	0 10-Dec., 1854.
10000	Brazilian Imperial (gold), Brazil	1 1/2	—	34 17 6	0 10	0 10-Jan., 1853.
2484	Burra Burra (copper), South Australia	40	55 1/2	60 12 6	0 10	0 10-March, 1854.
15000	Cobre Copper Company (copper), Brazil	1	—	4 18 0	0 10	0 10-March, 1855.
100000	Colonial Gold, Australia	16	34 1/2	8 10 0	0 10	0 10-Jan., 1853.
10000	Copago Mining Company (copper), Chili	1	—	3 0 0	0 10	0 10-March, 1855.
20000	General Min. Assoc. (iron, coal), Nova Scotia	30	18 1/2	2 0 6	0 10	0 10-June, 1854.
10000	Linares (lead), Potosi, Spain	3	—	0 10	0 10	0 10-June, 1854.
103815	Marigueta and New Granada	1	—	0 8 0	0 10	0 10-March, 1854.
30000	Mexican and South American (cop.), Mexico	1	—	0 8 0	0 10	0 10-June, 1854.
188570	North British Australasian	1	—	33 4 0	0 10	0 10-July, 1854.
2800	Oberhoff (lead), Nassau	12 1/2	6 1/2	0 19 0	0 10	0 10-July, 1854.
7000	Royal Santiago (copper), Cuba	1	—	27 17 6	0 10	0 10-Nov., 1854.
104000	San Fernando (silver-lead), Linares	15	—	1 16 6	0 10	0 10-Feb., 1855.
11000	St. John del Rey (gold), Brazil	7	—	0 10	0 10	0 10-Feb., 1855.
43174	United Mexican (silver), Mexico	25 1/2	—	0 10	0 10	0 10-Feb., 1855.

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
75000	Adelaide Land and Gold Comp.	2	—	—	—	—
100000	Agua Fria (gold), California	1	—	—	—	—
35000	Almaden (silver-lead), Spain	2	—	—	—	—
20000	Australian (cop.), S. Australia	6	—	—	—	—
75000	Brucutu (gold), Brazil	1 1/2	—	—	—	—
80000	Claudian Consols, Jamaica	1 1/2	—	—	—	—
14881	Cologne Mining Company	1	—	—	—	—
25000	Dalcarila (sl.-lead), Sweden	1 1/2	—	—	—	—
25000	Fortuna (silver-lead), Spain	1 1/2	—	—	—	—
130000	Gladbach (sl.-lead), Rhine Pruss.	1	—	—	—	—
30000	Iberian (silver-lead), Spain	1 1/2	—	—	—	—
12000	Jamaica (copper)	1	—	—	—	—
30000	Keeweenaw Point (cop., sl.), U.S.	4 1/2	—	—	—	—
3800	Kingsland (lead), Germany	1	—	—	—	—
60000	Liberty (gold), Virginia, U.S.	1	—	—	—	—

MINES WHICH HAVE SOLD ORES.

Shares.	MINES WHICH HAVE SOLD.	Paid.	Last Price.	Present.
3000	Altarnun Con. (tin, cop.), Altarnun	3 1/2	—	—
940	Balmuccia Con. (tin), Uny Lelant	3	—	—
4000	Bailowwiden United	1 1/2	—	—
13000	Bailowwiden (lead), Wicklow	1 1/2	—	—
4000	Ballyvaughin, Co. Clara	1 1/2	—	—
5000	Barytes Company of Ireland	1 1/2	—	—
4000	Bedford Consols	1 1/2	—	—
508	Bell and Lanarth, Gwynnapp	1 1/2	—	—
1500	Birch Hill, Bridford	25 18	—	—
3000	Bireh Tuer and Vistler, Lydford	2 1/2	—	—
1000	Boiling Well, Llanidloes	10	18	—
30	Bollwall and Nanpean (tin)	20	—	—
4000	Boringdon Consols, Plympton	4 1/2	—	—
340	Boscean (tin), St. Just	20	50	50 55
4383	Bottle Hill (copper), Flynham	3 1/2	—	—
128	Britannia, Llanidloes	2 1/2	15	—
4000	Bronfford (lead), Wales	20	—	—
100	Brynford Hall (lead), Flint	20	100	—
400	Budnick Consols (tin), Ferran	2 1/2	—	—
3000	Bweli (all-lead), Cardiganshire	4	5	—
6000	Cae-rionn (gold), Merioneth	2 1/2	—	—
8000	Cae-gwynon, Cardiganshire	2 1/2	—	—
1034	Caerphilly and Carinon, S. Wales	3	—	—
3000	Callington (d. cop.), Callington	2 1/2	—	—
3384	Calstock Consols (copper)	4 1/2	—	—
3164	Calstock United (tin and cop.)	2 1/2	—	—
3000	Camborne Consols	3 1/2	12 1/2	—
1024	Caradon Consols, St. Cleer	3	—	—
2000	Carbonta (tin, copper), Crowna	7	—	—
30000	Carmanvanshire Slate	3	—	—
1048	Carryvaugh (tin)	3	1 1/2	14 1/2
3000	Carreg-hora (cop. lead), Salsp.	1	—	—
4000	Carrevannall (copper), Gwynnapp	29 14 1/2	—	—
4000	Caste Dinas (tin), St. Colomb.	23	—	—
3000	Caylan, North Wales	3 1/2	—	—
3000	Cefn Bala (tin), St. Cleer	3	85	—
3000	Clare (lead), Cardiganshire	61 5 6	—	—
1024	Clijah & Wentworth (tin, cop.)	15	14 1/2	13 1/2
3000	Cloandnew Wood	8 1/2	—	—
3000	Cold Mawr Pool (lead), Llanarst	4	—	—
13000	Coneston, Galloway	4	—	—
510	Cook's Kitchen, Illogan	215 18 1/2	—	—
30000	Cosmehen (copper), Cork	1 1/2	—	—
900	Court Grange, Cardiganshire	10	—	—
1055	Craddock Moor (cop.), St. Cleer	3	13	13 1/2
6130	Craig-y-Meddy	1	—	—
500	Craig-y-Meddy (lead), Llanidloes	8 1/2	—	—